Course Descriptions
# About Course Descriptions

## Course Numbering System

<table>
<thead>
<tr>
<th>NUMBER RANGE</th>
<th>TYPE OF COURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-99</td>
<td>CREDIT, BACCALAUREATE DEGREE/TRANSFER LEVEL</td>
</tr>
<tr>
<td>70/170/270</td>
<td>CREDIT, SPECIAL TOPICS</td>
</tr>
<tr>
<td>97</td>
<td>CREDIT, WORK EXPERIENCE</td>
</tr>
<tr>
<td>98/198</td>
<td>CREDIT, EXPERIMENTAL COURSES</td>
</tr>
<tr>
<td>99/199</td>
<td>CREDIT, INDEPENDENT STUDY COURSES</td>
</tr>
<tr>
<td>100-199</td>
<td>CREDIT, ASSOCIATE-DEGREE APPLICABLE COURSES, NOT INTENDED FOR TRANSFER</td>
</tr>
<tr>
<td>200-299</td>
<td>CREDIT, OCCUPATIONAL SKILLS DEVELOPMENT COURSES</td>
</tr>
<tr>
<td>300-399</td>
<td>NONCREDIT, NON-GRADED, NON-BASIC SKILLS COURSES</td>
</tr>
<tr>
<td>400-499</td>
<td>NONCREDIT, NON-GRADED, SUPPLEMENTAL LABORATORY COURSES</td>
</tr>
<tr>
<td>500-599</td>
<td>CREDIT, VOCATIONAL COURSES NOT INTENDED FOR TRANSFER OR MAJOR</td>
</tr>
<tr>
<td>600-699</td>
<td>CREDIT, BASIC SKILLS, NOT TRANSFERABLE, NOT ASSOCIATE DEGREE APPLICABLE COURSES</td>
</tr>
<tr>
<td>700-799</td>
<td>NONCREDIT, NON-GRADED BASIC SKILLS, ESL, AND LIFE SKILLS COURSES</td>
</tr>
</tbody>
</table>

## Course Descriptions

Course descriptions provide a summary of the content of the course, enrollment restrictions, as well as grading policy exceptions such as P/NP, field trips, course-specific fees, allocation of class hours over the term for lecture, laboratory, or other required learning activities. The **Total Student Learning Hours** listed for every course includes the number of hours spent in lecture plus the number of hours spent in lab (if applicable) plus the recommended hours of study time. While the lecture and lab hours are fixed, the out-of-class study hours will vary from student to student.

## Articulation of Courses with Other Colleges

Columbia College articulates many of its courses with other public two- and four-year colleges and universities in California. This allows units earned at Columbia College to satisfy academic requirements at other schools. Please ask your counselor for information related to agreements establishing what courses will transfer and those that may lower-division preparation for a baccalaureate major at a four-year university.

## Transferability of Courses

Courses that transfer to the California State University (CSU) and/or the University of California (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.)

*These courses may have limits on the number of units that will transfer. Students should see a counselor to determine if these limitations will impact their transfer plans.

## Prerequisites/Corequisites/Recommended for Success

In accordance with the Title 5 of the California Educational Code, Columbia College may restrict enrollment in college courses through prerequisites, corequisites, advisories (“Recommended for Success”), and limitations on enrollment. Refer to page 43 for more information.

## Noncredit Courses

Noncredit Adult Education courses are offered to meet the needs of various populations within the community and may include courses in the following categories: English as a Second Language, Immigrant Education (including citizenship), Elementary and Secondary Basic Skills, Health and Safety, Courses for Adults with Substantial Disabilities, Parenting, Home Economics, Courses for Older Adults, Short-Term Vocational Courses (including apprenticeship), and Workforce Preparation. Noncredit courses do not satisfy graduation, transfer, or vocational requirements although some are required to complete noncredit certificates. Noncredit courses are listed at the end of credit courses within each applicable discipline. There is no enrollment fee for noncredit courses. The College also offers Community Education general interest courses in a wide variety of areas. These are fee-based offerings that do not appear on transcripts. Visit columbia.augusoft.net for the latest offerings.

## Credit Value

The number after the course indicates its unit credit value. Courses listed in this catalog are described in “semester” units. Some other colleges function on what is known as the “quarter” system. One unit of coursework completed in the quarter system equals .667 semester system units. Units completed at another college should be submitted to the Admissions & Records Office to properly count them toward a program of study at Columbia College.

## 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 Repetition of Courses on page 43 for more information.

## 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.
ANTHR (ANTHROPOLOGY)

ANTHR 1—Biological Anthropology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course introduces the concepts, methods of inquiry, and scientific explanations for biological evolution and their application to the human species. Issues and topics will include, but are not limited to, genetics, evolutionary theory, human variation and biocultural adaptations, comparative primate anatomy and behavior, and the fossil evidence for human evolution. The scientific method serves as foundation of the course. Not repeatable. MJC equivalent: (ANTHR 101) Transfer: (CSU/UC) (CSU-GE: B2, D) (IGETC: 4A, 5B) C-ID: (ANTH 110)

ANTHR 1L—Biological Anthropology Laboratory, 1 unit
Prerequisite/Corequisite: Completion of ANTHR 1 with at least a C or P, or concurrent enrollment in ANTHR 1
54 Laboratory Hours = 54 Total Student Learning Hours
This laboratory course is offered as a supplement to Introduction to Biological Anthropology either taken concurrently or in a subsequent term. Laboratory exercises are designed to introduce students to the scientific method and explore genetics, human variation, human and non-human primate anatomy and behavior, the primate/hominin fossil record and other resources to investigate processes that affect human evolution. Not repeatable. Transfer: (CSU) (CSU-GE: B3) C-ID: (ANTH 115L)

ANTHR 2—Cultural Anthropology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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, applied anthropology, the psychological perspective, religion, cultural change, and the cultural future of humanity. Not repeatable. MJC equivalent: (ANTHR 102) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4A) C-ID: (ANTH 120)

ANTHR 7/SOCIO 7—Gender, Culture and Society, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 once for ANTHR 7 or SOCIO 7. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4D) C-ID: (SOCI 140)

ANTHR 10 — Archaeology, 3 units
Formerly listed as: ANTHR 10 — Archaeology and Cultural Prehistory
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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; professional ethics; and selected cultural sequences. Not repeatable. MJC equivalent: (ANTHR 130) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4A) C-ID: (ANTH 150)

ANTHR 15—Native People of North America, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ANTHR 150) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4A, 4G)
ART (ART)

ART 1—Basic Freehand Drawing, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to principles, elements, and practices of drawing, employing a wide range of subject matter and drawing media. Focus on perceptually based drawing, observational skills, technical abilities, and creative responses to materials and subject matter. Not repeatable. Transfer: (CSU/UC) C-ID: (ARTS 110)

ART 2—Basic Color and Design, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to elements and principles of visual design and color theory as applied in a studio setting. Class will encompass organizing principles of two-dimensional art, including balance, proportion, repetition, contrast, harmony, unity, point of emphasis and visual movement. Focus will be on problem solving to develop two-dimensional awareness and development of skills in a variety of media. The translation of ideas and visual experience are an important consideration in creating finished class work/images. Course will include examination of historical and contemporary trends, materials and approaches in two-dimensional art. Development of a visual vocabulary for creative expression through lecture presentations, studio projects, problem solving, and written assignments. Not repeatable. Transfer: (CSU/UC) C-ID: (ARTS 100)

ART 3 — 3-D Design: Mixed Media, 3 units
Formerly listed as: ART 3 — 3-D Art and Design
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Explore 3D design concepts, applications and historical samples through hands on projects. Employ a variety of construction techniques to reinforce “organizational principles and elements” of art. Lectures, labs, and presentations will reinforce verbal and visual vocabularies. Not repeatable. MJC equivalent: (ART 125) Transfer: (CSU/UC) C-ID: (ARTS 101)

ART 9A—Figure Drawing: Beginning, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to observational drawing of the human figure by using various techniques and media. Students will learn both descriptive and expressive approaches to drawing the human figure. Topics include an introduction to human anatomy and the historical and contemporary roles of figure drawing in the visual arts. Not repeatable. MJC equivalent: (ART 123) Transfer: (CSU/UC) C-ID: (ARTS 200)

ART 9B—Figure Drawing: Intermediate, 3 units
Prerequisite(s): Completion of ART 9A with at least a C or P
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
An extension of ART 9A emphasizing various media and compositional problems. Not repeatable. Transfer: (CSU/UC)

ART 11 — History of Art: Ancient and Medieval, 3 units
Prerequisite(s): Completion of ENGL 151 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Survey of art history from the Paleolithic Age through the Late Gothic Era. Not repeatable. MJC equivalent: (ART 164) Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A) C-ID: (ARTH 110)

ART 12—History of Art: Renaissance, Baroque, and Modern, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Survey of art history from the 14th through the 20th century. Not repeatable. MJC equivalent: (ART 165) Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A) C-ID: (ARTH 120)

ART 13 — Art of Africa, Asia, Australia, and the Americas, 3 units
Prerequisite(s): Completion of ENGL 151 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Survey of the arts of the Islamic World, India and Southeast Asia, China, Japan and Korea, the Pacific, Australia, Africa and the Americas from prehistoric to modern periods. This course is designed to meet an ethnic studies requirement. Not repeatable. MJC equivalent: (ART 169) Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A)

ART 14 — Art Appreciation, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course provides a general introduction to art through the study of terminology, themes, theory, design principles, media and techniques with visual arts across various historical context and diverse cultures. Field trips required. Not repeatable. (CSU-GE: C1) (IGETC: 3A) Transfer: (CSU/UC)
ART 15 — History of Graphic Design, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course is a survey of the evolution of Graphic Design beginning with the development of writing and ending with the revolution of digital media. It looks at the history of visual communication and how it has evolved in art, graphic design, illustration and popular culture from the 19th century to the present. The survey takes into account sociopolitical and cultural contexts as well as artistic and technological characteristics of specific art movements. Students will create a project that will be based on a specific art movement and/or designers studied. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A)

ART 21A — Painting: Beginning, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to principles, elements, and practices of painting. Focus on exploration of oil and/or acrylic painting materials, perceptual skills and color theory, paint mixing and technique, as well as creative responses to materials and subject matter. Not repeatable. MJC equivalent: (ART 147 or ART 148) Transfer: (CSU/UC) C-ID: (ARTS 210)

ART 21B — Painting: Intermediate, 3 units
Prerequisite(s): Completion of ART 21A with at least a C or P
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Continuation of ART 21A with emphasis on personal expression. Not repeatable. MJC equivalent: (ART 149) Transfer: (CSU/UC)

ART 23A — Watercolor: Beginning, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to basic materials, techniques and problems of transparent watercolors. Not repeatable. Transfer: (CSU/UC)

ART 23B — Watercolor: Intermediate, 3 units
Prerequisite(s): Completion of ART 23A with at least a C or P
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Continuation of ART 23A introducing opaque watercolors and various experimental techniques. Not repeatable. Transfer: (CSU/UC)
ART 25 — Mixed Media Painting, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC)

ART 31 — Ceramics: Introductory, 3 units
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Introduction to basic ceramic methods including hand-building and wheel-thrown forms, and introduction to glazes and decoration. Not repeatable. MJC equivalent: (ART 108) Transfer: (CSU/UC)

ART 32 — Ceramics: Intermediate, 3 units
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Course emphasis is on glazes, formulation and application with increased opportunity for personal expression and experimentation. Not repeatable. Transfer: (CSU/UC)

ART 33 — Ceramics: Advanced, 3 units
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Course emphasis is on personal growth and independence. Not repeatable. Transfer: (CSU/UC)

ART 35 — Ceramic Raku and Alternative Firing Methods, 2 units
Formerly listed as: ART 35 — Raku and Alternative Firing Methods
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours = 108 Total Student Learning Hours
Materials fee required
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. Not repeatable. Transfer: (CSU/UC)

ART 36 — Wheel-Thrown Ceramics, 2 units
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours = 108 Total Student Learning Hours
Materials fee required
An introduction to throwing on the potter’s wheel, and its historical and contemporary significance. This class will introduce the process of wedging clay, centering a pot, pulling a wall, shaping process, and trimming techniques to complete well-balanced forms on the potter’s wheel. In addition, students will examine, discuss, critique and write about the techniques, terminology and processes of historical and contemporary thrown clay vessels. Students will use vocabulary in verbal and written class critiques. Not repeatable. Transfer: (CSU/UC)

ART 40 — Film Photography: Beginning, 4 units
Formerly listed as: ART 40 — Photography: Beginning
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
Introduction to the history, art, craft, and scope of black and white film 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. An adjustable 35mm film camera will be required. Not repeatable. Transfer: (CSU/UC)

ART 43 — Introduction to Digital Photography, 3 units
Formerly listed as: ART 98DP — Introduction to Digital Photography
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to digital photography through the disciplines of technical camera handling, use of natural and artificial lighting, composition, aesthetics, and basic image processing with the goal of producing high quality photos for fine art and commercial purposes. Field trips may be required. Not repeatable. Transfer: (CSU/UC)

ART 45 — Field Photography, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
An introduction to producing professional quality photographs in the field. Field instruction may include natural and commercial locations followed by lectures, demonstrations, and critiques. The student will utilize an adjustable film or digital camera. Field trips required. Not repeatable. Transfer: (CSU)

ART 46 — Field Photography: Composition and Design, 2 units
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable. Transfer: (CSU)

ART 49 — Intermediate Field Photography, 3 units
Recommended for Success: ART 45 or equivalent
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Various field and studio-oriented topics related to nature photography and commercial photography which may include but are not limited to learning to tell a story graphically and creating mockup book layouts. Students will also learn to identify and work on their own personal vision as it relates to photography. Students will do a series of assignments, learn picture editing, create and critique picture layouts and learn how to plan detailed photographic coverage. Not repeatable. Transfer: (CSU)
ART 51/MEDIA 14 — Publication Design, 3 units  
**Formerly listed as:** ART 51 — Publication Design I  
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours  
**Materials fee required**  
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: MEDIA 14 or ART 51. Not repeatable. **Transfer:** (CSU)  

ART 53/MEDIA 10 — Computer Graphics, 3 units  
**Formerly listed as:** ART 53 — Computer Graphics I  
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours  
**Materials fee required**  
This course introduces the student to the fundamentals of computer graphics. Topics include the elements and principles of design, concept development, characteristics of vector and raster digital files, color modes, digital drawing and painting, and formatting for print and the Web. Students will acquire basic skills in current digital illustration software and create original design pieces. Credit may be earned for only one of the following: MEDIA 10 or ART 53. Not repeatable. **Transfer:** (CSU/UC) **C-ID:** (ARTS 250)  

ART 56/MEDIA 16 — Typography, 3 units  
**Prerequisite(s):** Completion of MEDIA 10 or ART 53 with at least a C or P  
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours  
**Materials fee required**  
This course is an introduction to typography for visual communication in graphic design and emphasizes the use of typography in the design process. It includes aspects of analytical and creative problem solving in print collateral and web design. The course considers typographic design for current and emerging technologies. Additionally, students explore the evolution and classification of letterforms from ancient to contemporary, and feature the investigation of structure, format, legibility and creative expression. Credit may be earned for only one of the following: MEDIA 16 or ART 56. Not repeatable. **Transfer:** (CSU/UC)  

ART 71 — Ceramic Sculpture: Introductory, 3 units  
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours  
**Materials fee required**  
Basic principles, techniques, and problems in sculpture. Not repeatable. **Transfer:** (CSU/UC)  

ART 72 — Ceramic Sculpture: Advanced, 3 units  
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours  
**Materials fee required**  
Course emphasis is on advanced principles, techniques, and problems in hand-built sculpture. Not repeatable. **Transfer:** (CSU/UC)  

ART 103/WT 103 — Practical Laboratory - Metal Sculpture, 1 unit  
**Prerequisite(s):** Completion of ART 165 or WT 165 with at least a C or P  
54 Laboratory Hours = 54 Total Student Learning Hours  
**Materials fee required**  
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. Not repeatable.  

ART 165/WT 165 — Metal Sculpture, 1.5 units  
9 Lecture Hours, 54 Laboratory Hours, 18 Out-of-Class Hours = 81 Total Student Learning Hours  
**Materials fee required**  
An introduction to various metal working techniques with an emphasis on aesthetic design and quality of metal joining. A brief introduction to M.I.G. welding will be included. Credit may be earned for only one of the following: ART 165 or WT 165. Not repeatable.  

ART 166/WT 166 — Metal Sculpture Projects, 1 unit  
**Prerequisite(s):** Completion of ART 165 or WT 165 with at least a C or P  
54 Laboratory Hours = 54 Total Student Learning Hours  
**Materials fee required**  
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. Field trips may be required. Not repeatable.
COURSES: ART - ASTRO

The following courses are noncredit and are not applicable for graduation and/or transfer.

### ART (Noncredit courses in Art)

**ART 300 — 2-D Art for Life**
36 Lecture Hours, 81 Laboratory Hours = 117 Total Student Learning Hours
Provides lifelong education for older adults and promotes the refinement of craft and content in 2-D art. Students will focus on the elements of design, color, line, shape and form, space and texture, and the principles of design, balance, variety, proportion, emphasis, movement, harmony and rhythm. Students will learn to better understand their own artwork as well as other artwork. Unlimited repeats. Non-graded.

**ART 330 — Creative Ceramics and Sculpture**
36 Lecture Hours, 54 Laboratory Hours = 90 Total Student Learning Hours
*Materials fee required*
Study and creation of ceramic art of various styles and media for community adults. Unlimited repeats. Non-graded.

**ART 340 — Creative Photography**
36 Lecture Hours, 54 Laboratory Hours = 90 Total Student Learning Hours
Study and application of various photography styles and media for older adults. Students will enjoy various outdoor field experiences and/or photography developing techniques. This course is designed to help the student acquire new knowledge and photographic skills. Field trips may be required. Unlimited repeats. Non-graded.

### ASTRO (ASTRONOMY)

**ASTRO 40 — Descriptive Astronomy, 3 units**
*Formerly listed as: ESC 40 — Descriptive Astronomy*
*Recommended for Success: Eligibility for English 1A*
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.
MJC equivalent: (ASTRO 160) Transfer: (CSU/UC) (CSU-GE: B1) (IGETC: 5A)
AT (AUTOMOTIVE TECHNOLOGY)

AT 97—Work Experience in Auto Technology, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. For students interested in working full time one semester and attending classes one semester on an alternate basis. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

AT 100—Introduction to Automotive Technology, 4 units
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning 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. Field trips may be required. Not repeatable. Grading: (P/NP only) C-ID: (AUTO 110X)

AT 102—Engine Repair, 5 units
54 Lecture Hours, 108 Laboratory Hours, 108 Out-of-Class Hours = 270 Total Student Learning Hours
Materials fee required
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 required. Not repeatable.

AT 103 — Practical Laboratory, .5 to 2 units
0.5 Unit: 27 Laboratory Hours = 27 Total Student Learning Hours
1 Unit: 54 Laboratory Hours = 54 Total Student Learning Hours
1.5 Units: 81 Laboratory Hours = 81 Total Student Learning Hours
2 Units: 108 Laboratory Hours = 108 Total Student Learning Hours
Materials fee required
This course includes special automotive repair projects that are assigned to students, with emphasis on speed, accuracy, and quality work habits. Field trips required. Not repeatable.

AT 104 — Practical Lab (Auto Body), .5 to 2 units
0.5 Unit: 27 Laboratory Hours = 27 Total Student Learning Hours
1 Unit: 54 Laboratory Hours = 54 Total Student Learning Hours
1.5 Units: 81 Laboratory Hours = 81 Total Student Learning Hours
2 Units: 108 Laboratory Hours = 108 Total Student Learning Hours
Materials fee required
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. Not repeatable.

AT 105—Automotive Braking Systems, 4 units
36 Lecture Hours, 108 Laboratory Hours, 72 Out-of-Class Hours = 216 Total Student Learning Hours
Materials fee required
This course covers the principles of operation and repair of automotive drum and disc brake systems. Also covered are anti-lock braking and traction control 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. Field trips may be required. Not repeatable. C-ID: (AUTO 150X)

AT 106—Engine Performance, 8 units
90 Lecture Hours, 162 Laboratory Hours, 180 Out-of-Class Hours = 432 Total Student Learning Hours
Materials fee required
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. Field trips may be required. Not repeatable.
AT 112—Heating and Air Conditioning, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
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. Not repeatable. C-ID: (AUTO 170X)

AT 113—Automotive Electrics, 7 units
90 Lecture Hours, 108 Laboratory Hours, 180 Out-of-Class Hours = 378 Total Student Learning Hours
Materials fee required
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 120—Suspension and Steering, 4 units
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
Materials fee required
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 to prepare for Automotive Service Excellence (ASE) certification.

AT 122 — Manual Power Trains and Axles, 4 units
36 Lecture Hours, 108 Laboratory Hours, 72 Out-of-Class Hours = 216 Total Student Learning Hours
Materials fee required
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. Not repeatable. C-ID: (AUTO 140X)

AT 125—Team-Managed Projects, 3 units
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours
Using a team-based format, students will solve problems using various principles and fundamentals in automotive technology and by following a Total Quality Management (TQM) process. Grading: (P/NP only) Field trips may be required. Not repeatable.

AT 132—Automatic Transmissions and Transaxles, 3 units
18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Principles and theories involved with the 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. Not repeatable. C-ID: (AUTO 120X)

AT 141 — Smog Check Inspector and Repair, 4 units
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
This course includes state required training for Smog Check inspector and Smog Check repair technician candidates. 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. Not repeatable.

AT 150—Soft Skills for the Industrial Trades, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
This course covers the “soft skills” needed to succeed in a career that involves a shop environment. Topics include workplace communications, ethics, safety, customer service, pay models, self-awareness of employee/employer expectations, and other attributes of a prosperous employee. Field trips may be required. Not repeatable.

AT 155 — Automotive Spray Refinishing I, 2 units
Prerequisite(s): Completion of AT 186 with at least a C or P
18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning Hours
Materials fee required
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 may be required. Not repeatable.
AT 156—Automotive Spray Refinishing II, 3 units
Prerequisite(s): Completion of AT 155 with at least a C or P
18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours
= 162 Total Student Learning Hours
Materials fee required
Advanced techniques in automotive refinishing with single stage, base/clear coat urethane paints, and estimate writing. Field trips may be required. Not repeatable.

AT 160/WT 160—Exploring Technical Trades, 6 units
54 Lecture Hours, 162 Laboratory Hours, 108 Out-of-Class Hours
= 324 Total Student Learning Hours
Materials fee required
Students will experience topics and engage in projects from the auto body/collision repair, automotive technology, and welding technology programs. Career and educational pathways will be emphasized. Field trips may be required. Credit may be eared once for AT 160 or WT 160. Not repeatable.

AT 161 — Motorcycle Maintenance I, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours
= 162 Total Student Learning Hours
Foundation knowledge and skills in primary motorcycle systems, maintenance schedules and inspections. Focus on identifying and conforming to manufacturers specifications. Not repeatable.

AT 180 — Small Engine Repair, 3 units
45 Lecture Hours, 27 Laboratory Hours, 90 Out-of-Class Hours
= 162 Total Student Learning Hours
Materials fee required
Servicing, operation, and maintenance of small gasoline engines, garden and landscape equipment. The student will need safety glasses and a small engine to overhaul. Field trips may be required. Not repeatable.

AT 185—Auto Body Collision Repair I, 2 units
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours
= 108 Total Student Learning Hours
Materials fee required
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. Not repeatable.

AT 186—Auto Body Collision Repair II, 2 units
Recommended for Success: AT 185
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours
= 108 Total Student Learning Hours
Materials fee required
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. Not repeatable.

AT 187—Automotive Detailing, 1 unit
9 Lecture Hours, 27 Laboratory Hours, 18 Out-of-Class Hours
= 54 Total Student Learning Hours
Materials fee required
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. Not repeatable.

AT 200—Exploring Automotive Technology, 3 units
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours
= 162 Total Student Learning Hours
Materials fee required
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. Field trips may be required. Not repeatable. Grading: (P/NP only)
BIOL (BIOLOGY)

BIOL 2 — Cell and Molecular Biology, 4 units
Prerequisite(s): Completion of MATH 104 and CHEM 2A with at least a C or P
Recommended for Success: ENGL 151
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. MJC equivalent: (BIO 101) Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C) C-ID: (BIOL 190) (BIOL 2+BIOL 4=BIOL 6=BIOL 135S)

BIOL 4 — Principles of Evolution and Zoology, 4 units
Prerequisite(s): Completion of MATH 104 with at least a C or P
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
As part of the Biology Majors sequence, students explore the diversity of the animal kingdom and non-photosynthetic single celled eukaryotic taxa. Core concepts of the course include mechanisms of evolution, comparative anatomy physiology and behavior among animal phyla, and life cycles. Students will also deepen their understanding of the nature of science and practice scientific reasoning skills. Field trips may be required. Not repeatable. MJC equivalent: (ZOO 101) Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C) C-ID: (BIOL 150) (BIOL 4+BIOL 6=C-ID BIOL 140) (BIOL 2+BIOL 4+BIOL 6=C-ID BIOL 135S)

BIOL 6 — Plant Biology And Ecology, 4 units
Prerequisite(s): Completion of MATH 104 with at least a C or P
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. MJC equivalent: (BOT 101) Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C) C-ID: (BIOL 155) (BIOL 4+BIOL 6=C-ID BIOL 140) (BIOL 2+BIOL 4+BIOL 6=C-ID BIOL 135S)

BIOL 10 — Human Anatomy, 4 units
Prerequisite(s): Completion of ENGL 151 and MATH 104 with at least a C or P
Recommended for Success: BIOL 17 or BIOL 150
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
An introduction to the study of the gross and microscopic structure of the human body using an organ systems approach including the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. As part of the learning process students work with cadavers and models, and conduct dissections of organs and specimens. This course is primarily intended for nursing, allied health, kinesiology, and other health related majors. Not repeatable. MJC equivalent: (ANAT 125) Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C) C-ID: (BIOL 110B)

BIOL 17 — Fundamentals of Biology, 4 units
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
An integrated lecture and laboratory course of study emphasizing the fundamental principles common to all forms of life. The course is a core general education biology class for transfer students and for AA and AS students at Columbia College. The laboratory makes extensive use of computer simulations as experimentation in traditional laboratory. Not repeatable. MJC equivalent: (BIO 111) Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C)

BIOL 24 — Introduction to Environmental Science, 4 units
Formerly listed as: BIOL 24 — General Ecology
Recommended for Success: MATH 101 and ENGL 1A
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
Students will be introduced to environmental issues from a scientific perspective. The course will focus on the physical, chemical and biological process within Earth systems. A major focus will be on the interaction between humans and ecological processes and factors involved in developing sustainable solutions to pressing environmental challenges. Topics include physiological, behavioral, and population ecology, and on linking ecological processes to evolution. Principles of biodiversity, climate change, sustainability, renewable and nonrenewable energy, water resources, air and water pollution and solid waste management will be discussed within the context of managing systems. Field trips may be required. Not repeatable. MJC equivalent: (BIO 114) Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C)
BIOL 30 — Cadaver Anatomy, 2 units

Enrollment limited to: Recommendation of the BIOL 10 Instructor
Prerequisite(s): Completion of BIOL 10 with a B or better

18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning Hours

An introduction to the study of human cadaver dissection using a regional anatomy approach exposing structures of the integument, muscular, skeletal, cardiovascular, respiratory, digestive, urinary, reproductive, nervous, endocrine, and lymphatic systems. The class is intended to help prepare students entering health professions or kinesiology. Not repeatable. Transfer: (CSU)

BIOL 39—Field Biology, 1 to 2 units

1 Unit: 18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
2 Units: 36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Field trips required. Not repeatable. Transfer: (CSU)

BIOL 40—Field Biology: Ecosystems, 1 unit

18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

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. Not repeatable. Transfer: (CSU)

BIOL 50—Nutrition, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: E) C-ID: (NUTR 110)
COURSES: BIOL

**BIOL 60 — Human Physiology, 4 units**  
**Prerequisite(s):** Completion of ENGL 151 and MATH 104 with at least a C or P, or placement through the assessment process  
**Recommended for Success:** BIOL 10, BIOL 17, CHEM 14 and CHEM 14L  
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours  
Study of the physiological principles, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system and organism level: integumentary system, bone, skeletal, smooth and cardiac muscles, nervous system, sensory organs, cardiovascular system, lymphatic and immune systems, respiratory system, urinary system, digestive system, endocrine system, and reproductive system. This course is primarily intended for nursing, allied health, kinesiology, and other health-related majors. Not repeatable. MJC equivalent: (PHYSO 101)  
Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C)  
C-ID: (BIOL 120B)

**BIOL 65 — Microbiology, 4 units**  
**Recommended for Success:** BIOL 17, CHEM 14, and CHEM 14L  
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours  
Morphology, physiology, genetics, cultivation and control of micro-organisms, particularly bacteria and viruses. Principles of immunology and the relationship of microbes to disease are included. Not repeatable. MJC equivalent: (MICRO 101)  
Transfer: (CSU/UC) (CSU-GE: B2, B3) (IGETC: 5B, 5C)

**BIOL 100 — A Natural History of California, 3 units**  
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours  
This course is an introduction to plants and animals of California with emphasis on the plant communities and wildlife of the Central Valley, the coastal ranges, and the Sierra Nevada. Ecologically oriented, the course probes ways in which plants and animals are adapted to their environment. Present and historical human environmental relationships will be investigated. Field trip required. Not repeatable.

**BIOL 150 — Elementary Anatomy and Physiology, 3 units**  
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours  
Introduction to human structure and function. Designed as a foundation course for the allied health student, but open to all interested students. Not repeatable. MJC equivalent: (AP 50)

**BIOL 158 — Birds of Central California, 1 unit**  
9 Lecture Hours, 27 Laboratory Hours, 18 Out-of-Class Hours = 54 Total Student Learning 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, evolution, and ecology of birds. Field trips may be required. Not repeatable. Grading: (P/NP only)

**BIOL 159 — Wildflowers, 1.5 units**  
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours  
A survey of wildflowers. Includes basic identification, and recognition of common species and families, terminology, and natural history. Field trips required. Not repeatable. Grading: (P/NP only)

**BIOL 160 — Mushrooms and Other Fungi, 1.5 units**  
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning 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. Field trips may be required. Not repeatable. Grading: (P/NP only)

**BIOL 179 — Fishing and Fishery Biology of the Sierra Nevada, 2 units**  
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours  
An overview of the identification, ecology, and management of fish species inhabiting the foothill, forest and alpine communities of the Sierra Nevada. Field trips required. Not repeatable.
BUSAD

(BUSINESS ADMINISTRATION)

BUSAD 2A — Financial Accounting, 4 units
Recommended for Success: COMP 5
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning 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 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. Not repeatable. MJC equivalent: (BUSAD 201) Transfer: (CSU/UC) C-ID: (ACCT 110)

BUSAD 2B — Managerial Accounting, 4 units
Prerequisite(s): Completion of BUSAD 2A with at least a C or P
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. MJC equivalent: (BUSAD 202) Transfer: (CSU/UC) C-ID: (ACCT 120)

BUSAD 18 — Business Law, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (BUSAD 218) Transfer: (CSU/UC) C-ID: (BUS 125)

BUSAD 20 — Principles of Business, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (BUSAD 248) Transfer: (CSU/UC) C-ID: (BUS 110)

BUSAD 24 — Human Relations in Organizations, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

BUSAD 25/GUIDE 25 — Job Search and Interviewing Strategies, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
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. Not repeatable. MJC equivalent: (GUIDE 112) Transfer: (CSU)

BUSAD 29/COMP 29 — Project Management, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 29 or COMP 29. Not repeatable. Transfer: (CSU)

BUSAD 30 — Principles of Marketing, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Marketing principles, policies, and functions, price policies and controls, trade channels, merchandising, market research, advertising, and competitive practices. Transfer credit limited to elective units only. This course not required for students transferring with an AS-T in Business Administration. Not repeatable. MJC equivalent: (BUSAD 245) Transfer: (CSU)
BUSAD 40—Principles of Management Leadership, 3 units
Formerly listed as: BUSAD 40 — Principles of Management
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
The principles of management leadership, techniques of decision making and problem solving, methods used by the leader to achieve organizational goals, communication styles, leading teams and change, and the importance of relationships in the success of organizations. Transfer credit limited to elective units only. This course not required for students transferring with an AS-T in Business Administration. Not repeatable. Transfer: (CSU)

BUSAD 41—Small Business Management, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

BUSAD 97 — Work Experience in Business and Commerce, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

BUSAD 135—Computerized Accounting (QuickBooks), 2 units
Recommended for Success: BUSAD 161
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
Provides the student opportunities to set up and maintain a computerized accounting system using QuickBooks application software. Review of financial accounting in working with payables, receivables, banking transactions, company transactions and the financial statements. Not repeatable.

BUSAD 155—Computerized Accounting for Business, 4 units
Recommended for Success: BUSAD 2A or BUSAD 161
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
Provides an opportunity to set up and maintain an accounting system utilizing accounting software such as QuickBooks. Hands-on experience in the software will help students learn computerized methods of financial accounting; including sales, accounts receivable, accounts payable, inventory, adjusting entries, closing entries, financial statements, sales tax and customized reports. Not repeatable.

BUSAD 158—Payroll Accounting, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable.

BUSAD 161—Small Business Accounting, 4 units
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning 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; Financial statement analysis, cash flows statements, accounts receivable and accounts payable. Not repeatable.

BUSAD 163—Business Mathematics, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.

BUSAD 164—Income Tax, 3 units
45 Lecture Hours, 27 Laboratory Hours, 90 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.
COURSES: CHEM

CCTDM  
Digital Media  
See MEDIA

COURSES: CHEM

CHEM  (CHEMISTRY)

CHEM 2A — General Chemistry I, 3 units  
**Prerequisite(s):** Completion of MATH 104, and CHEM 5 or CHEM 14, with at least a C or P or completion of High School Chemistry course with a B or better  
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours  
The first half of a two-semester course designed to give an in-depth survey of chemical principles and theories. Covered subjects are: measurement theory and practice, data acquisition and analysis, modern atomic theory, ionic and covalent bonding, periodic properties, reaction classifications, stoichiometry, gas and solution chemistry, thermochemistry, intermolecular forces, and colligative properties. Further topics may include introductions to valence bond and molecular orbital theory, quantum chemistry, green chemistry, and non-ideal gas equations. Not repeatable. MJC equivalent sequence: (CHEM 2A+CHEM 2AL=CHEM 101)  
**Transfer:** (CSU/UC-Transfer credit limited. See a counselor.) (IGETC: 5A) C-ID: (CHEM 2A+CHEM 2AL = C-ID CHEM 110) (CHEM 2A+CHEM 2AL+CHEM 2B+CHEM 2BL = C-ID CHEM 120S)

CHEM 2AL — General Chemistry I Laboratory, 2 units  
**Prerequisite/Corequisite:** Completion of or concurrent enrollment in CHEM 2A with at least a C or P  
18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CC CHEM 2B + CHEM 2BL = MJC CHEM 102)  
**Transfer:** (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B3) (IGETC: 5C) C-ID: (CHEM 2A+CHEM 2AL+CHEM 2BL = C-ID CHEM 120S)

CHEM 2B — General Chemistry II, 3 units  
**Prerequisite(s):** Completion of CHEM 2A with at least a C or P  
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CC CHEM 2B + CHEM 2BL = MJC CHEM 102)  
**Transfer:** (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1) (IGETC: 5A) C-ID: (CHEM 2A+CHEM 2AL+CHEM 2B+CHEM 2BL = C-ID CHEM 120S)

CHEM 2BL — General Chemistry II Laboratory, 2 units  
**Prerequisite/Corequisite:** Completion of or concurrent enrollment in CHEM 2B with at least a C or P  
18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CC CHEM 2B + CHEM 2BL = MJC CHEM 102)  
**Transfer:** (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B3) (IGETC: 5C) C-ID: (CHEM 2A+CHEM 2AL+CHEM 2BL = C-ID CHEM 120S)

CHEM 4A — Organic Chemistry I, 3 units  
**Prerequisite(s):** Completion of CHEM 2B with at least a C or P  
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CHEM 4A & CHEM 4AL = MJC CHEM 112 or MJC CHEM 122)  
**Transfer:** (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1) (IGETC: 5A) C-ID: (CHEM 4A+CHEM 4AL = C-ID CHEM 150) (CHEM 4A+CHEM 4AL+CHEM 4B+CHEM 4BL = C-ID: CHEM 160S)
CHEM 4AL—Organic Chemistry I Laboratory, 1 unit
Prerequisite/Corequisite: Completion of or concurrent enrollment in CHEM 4A with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CHEM 4A & CHEM 4AL = MJC CHEM 112 or MJC CHEM 122) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B3) (IGETC: 5C) C-ID: (CHEM 4A+CHEM 4AL = C-ID CHEM 150) (CHEM 4A+CHEM 4AL+CHEM 4B+CHEM 4BL = C-ID CHEM 160S)

CHEM 4B—Organic Chemistry II, 3 units
Prerequisite(s): Completion of CHEM 4A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CHEM 4B & CHEM 4BL = MJC CHEM 113 or MJC CHEM 123) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1) (IGETC: 5A) C-ID: (CHEM 4A+CHEM 4AL+CHEM 4B+CHEM 4BL = C-ID CHEM 160S)

CHEM 4BL—Organic Chemistry II Laboratory, 1 unit
Prerequisite/Corequisite: Completion of or concurrent enrollment in CHEM 4B with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CHEM 4B & CHEM 4BL = MJC CHEM 113 or MJC CHEM 123) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B3) (IGETC: 5C) C-ID: (CHEM 4A+CHEM 4AL+CHEM 4B+CHEM 4BL = C-ID CHEM 160S)

CHEM 5—Introductory Chemistry: Environmental Emphasis, 3 units
Prerequisite(s): Completion of MATH 101 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1) (IGETC: 5A) C-ID: (CHEM 5+CHEM 5L = C-ID CHEM 106B)

CHEM 5L—Introductory Chemistry Laboratory, 1 unit
Prerequisite/Corequisite: Completion of or concurrent enrollment in CHEM 5 with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B3) (IGETC: 5C) C-ID: (CHEM 5+CHEM 5L = C-ID CHEM 106B)

CHEM 14—Fundamental Chemistry for Allied Health, 3 units
Prerequisite(s): Completion of MATH 101 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CC CHEM 14 & CHEM 14L = MJC CHEM 143) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1) (IGETC: 5A) C-ID: (CHEM 14+CHEM 14L = C-ID CHEM 101)
CHEM 14L—Fundamental Chemistry for Allied Health Laboratory, 1 unit

Prerequisite/Corequisite: Completion of or concurrent enrollment in CHEM 14 with at least a C or P

54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJC equivalent sequence: (CC CHEM 14 & CHEM 14L = MJC CHEM 143) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B3) (IGETC: 5C) C-ID: (CHEM 14 + 14L = C-ID CHEM 101)

CHEM 30/PHYCS 30—Survey of Chemistry and Physics, 4 units

Prerequisite(s): Completion of MATH 101 with at least a C or P

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours

An investigation of basic principles of physics and chemistry including matter, physical and chemical properties, energy, motion, light, atomic structure, bonding, solutions and chemical reactions. The inter-dependence of chemistry and physics will be emphasized. The inquiry-based learning experience is designed to assist students and future science educators in learning how to guide learning by self-discovery. Credit may be earned once for CHEM 30 or PHYCS 30. Not repeatable. MJC equivalent: (PHSCI 180) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (CHEM 30 or PHYCS 30 = C-ID CHEM 140)
CHILD (CHILDDV DEVELOPMENT)

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

CHILD 1 — Child Growth and Development, 3 units

Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Examines the major physical, psychosocial, and cognitive/language developmental milestones, both typical and atypical, from conception through adolescence. 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. Not repeatable. MJC equivalent: (CLDDV 103) Transfer: (CSU/UC) (CSU-GE: D, E) (IGETC: 4G) C-ID: (CDEV 100)

CHILD 3 — Principles and Practices of Teaching Young Children, 3 units

Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Examines the role of the early childhood educator, the importance of teacher-child relationships, and effective teaching strategies and environmental design for supporting development in young children. Review of historical roots of early childhood programs, career pathways, and the evolution of the professional practices promoting advocacy, ethics, and professional identity. Not repeatable. MJC equivalent: (CLDDV 101) Transfer: (CSU) C-ID: (ECE 120)

CHILD 4 — Observation and Assessment, 3 units

Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Introduces appropriate use of a variety of assessment and observation tools and strategies to document and analyze young children’s development, behavior, and learning. Emphasizes use of findings to inform and plan learning environments and experiences. Recording strategies, rating systems, portfolios, and multiple assessment tools will be explored, along with strategies for collaboration with families and professionals. Not repeatable. MJC equivalent: (CLDDV 167) Transfer: (CSU) C-ID: (ECE 200)

CHILD 16 — Practicum-Field Experience, 3 units

Formerly listed as: CHILD 16 — Practicum
Prerequisite/Corequisite: Completion of CHILD 1 and CHILD 22 with at least a C or P, and completion of, or concurrent enrollment in, CHILD 3

Recommended for Success: ENGL 151 or eligibility for ENGL 1A
18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours

Under guided supervision, students will utilize practical classroom experiences to make connections between theory and practice, demonstrate developmentally appropriate early childhood program planning and teaching competencies, develop professional behaviors, and build a comprehensive understanding of children and families at an approved placement site. Reflective practice will be emphasized as student teachers design, implement, and evaluate child-centered, play-oriented approaches and strategies, and techniques that promote development and learning. Course qualifies for the 3 units of supervised field experience toward a Child Development Permit (issued by the California Commission on Teacher Credentialing). Not repeatable. MJC equivalent: (CLDDV 128) Transfer: (CSU) C-ID: (ECE 210)

CHILD 17 — Adult Supervision Practicum

Formerly listed as: CHILD 17 — Adult Supervision Practicum
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
45 Lecture Hours, 27 Laboratory Hours, 90 Out-of-Class Hours = 162 Total Student Learning Hours

Methods and principles of supervising student teachers, volunteers, staff, and other adults in early care and education settings. Emphasis is on the roles and development of early childhood professionals as mentors and leaders. Curriculum is designed for students seeking to fulfill the adult supervision units for the Child Development Master Teacher and Site Supervisor Permits. Not repeatable. MJC equivalent: (CLDDV 154) Transfer: (CSU)

CHILD 19 — Introduction to Children with Special Needs, 3 units

Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Introduces the variations in development of children with special needs, from birth through age eight, and the resulting impact on families. Includes an overview of historical and societal influences, laws relating to children with special needs, and the identification and referral process. Not repeatable. Transfer: (CSU)
CHILD 22 — Child, Family, and Community, 3 units
Formerly listed as: CHILD 22 — Child, Family, Community
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
An examination of the processes of socialization focusing on the interrelationship of family, school, and community. Examines the influence of historical and socio-cultural contexts. Explores the role of collaboration between family, community, and schools in supporting children's development. Not repeatable. Transfer: (CSU) (CSU-GE: D) C-ID: (CDEV 110)

CHILD 23 — Guiding Children’s Social and Emotional Development, 3 units
Formerly listed as: CHILD 23 — Guiding Children's Social Development
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to positive guidance and discipline approaches in educational and family settings. Designed to build skills in parents and teachers necessary to promote healthy social development in children. Examination of underlying causes of misbehavior, supporting children in stressful situations, fostering self-discipline and self-regulation, encouraging children's friendships, promoting pro-social behavior, guiding children's extreme behavior, and self-examination of culturally appropriate, anti-bias approaches in support of children becoming competent members of a diverse society. Not repeatable. MJC equivalent: (CLDDV 121) Transfer: (CSU)

CHILD 26 — Health, Safety, and Nutrition, 3 units
Formerly listed as: CHILD 26 — Health, Safety and Nutrition
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to laws, regulations, standards, policies, procedures, and best practices for curriculum related to health, safety, and nutrition in early childhood settings. Includes prevention strategies, nutrition, and meal planning for various ages and planning educational experiences integrated into everyday planning and program development. 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. Not repeatable. Transfer: (CSU) C-ID: (ECE 220)

CHILD 30 — Administration I: Programs in Early Childhood Education, 3 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to the administration of early childhood programs. Covers program types, budget, management, regulations, laws, development and implementation of policies and procedures. Examines administrative tools, philosophies, and techniques needed to organize, open, and operate an early care and education program. Not repeatable. MJC equivalent: (CLDDV 150) Transfer: (CSU)

CHILD 31 — Admin II: Personnel & Leadership in Early Childhood Education, 3 units
Formerly listed as: CHILD 31 — Advanced Child Care Administration
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (CLDDV 151) Transfer: (CSU)

CHILD 35 — Introduction to Curriculum, 3 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Overview of knowledge and skills related to providing developmentally appropriate curriculum and environments for young children. Explores teaching strategies and curriculum development based on theoretical frameworks, observation, and assessment. Examines the teacher's role in supporting development and learning across the curriculum, including all content areas. Not repeatable. MJC equivalent: (CLDDV 107) Transfer: (CSU) C-ID: (ECE 130)

CHILD 36 — Teaching in a Diverse Society, 3 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Examines the impact of various societal influences on the development of children's social identity. Examination of culturally relevant and linguistically appropriate anti-bias approaches supporting all children. Self-examination and reflection on one’s own understanding of diversity in order to inform teaching practices and/or program development. Emphasis on issues related to social identity, stereotypes, and bias along with the theoretical and practical implications of oppression and privilege. Not repeatable. MJC equivalent: (CLDDV 262) Transfer: (CSU) (CSU-GE: D) C-ID: (ECE 230)
COURSES: CHILD

CHILD 41 — Implementing Curriculum for Young Children, 4 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning Hours
A hands-on approach of basic skills, methods, and theory in designing and facilitating developmentally appropriate activities for children birth to age 8. Examine connection between child’s family and culture, observation, documentation, and assessment while planning large and small group time experiences in the areas of history-social science, language and literacy, mathematics, safety, science, and visual and performing arts; and exploring the building of relationships and care routines as core to developing curriculum for infants and toddlers. Not repeatable. Transfer: (CSU)

CHILD 42 — Infant/Toddler Development, 3 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
A study of infants and toddlers from pre-conception to age three including physical, cognitive, language, social, and emotional growth and development. Applies theoretical frameworks to interpret behavior and interactions between heredity and environment. Emphasizes the role of family and relationships in development. Not repeatable. MJC equivalent: (CLDDV 125) Transfer: (CSU)

CHILD 43 — Infant/Toddler Care and Education, 3 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Applies current theory and research to the care and education of infants and toddlers in group settings. Examines essential policies, principles and practices that lead to quality care and developmentally appropriate curriculum for children birth to 36 months. Not repeatable. MJC equivalent: (CLDDV 122) Transfer: (CSU)

CHILD 44 — Infant/Toddler Practicum-Field Experience, 3 units
Formerly listed as: CHILD 44 — Infant/Toddler Practicum
Prerequisite/Corequisite: Completion of CHILD 1 and CHILD 22 with at least a C or P and completion of, or concurrent enrollment in, CHILD 3
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours
Under guided supervision, students will utilize practical classroom experiences to make connections between theory and practice, demonstrate developmentally appropriate early childhood program planning and teaching competencies, develop professional behaviors, and build a comprehensive understanding of children and families at an approved infant/toddler placement site. Reflective practice will be emphasized as student teachers design, implement, and evaluate relationship planning, cultural responsiveness, child-centered, play-oriented approaches and strategies, and techniques that promote development and learning. Course qualifies for the 3 units of supervised field experience toward a Child Development Permit (issued by the California Commission on Teacher Credentialing). Not repeatable. MJC equivalent: (CLDDV 127) Transfer: (CSU)
C-ID: (ECE 210)

CHILD 45 — School-Age Child Development, Care and Education, 3 units
Formerly listed as: CHILD 45 — School-Age Child Care
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to the study of child development, surround care, and education for children ages 6 to 12 and an overview of skills necessary to provide appropriate care for this age group. Course qualifies for Master Teacher Specialization toward a Child Development Permit (issued by the California Commission on Teacher Credentialing). Not repeatable. Transfer: (CSU)

CHILD 97 — Work Experience in Child Development, 1-4 units
Recommended for Success: ENGL 151 or eligibility for ENGL 1A
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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 work experience in an Early Care and Education setting. The student's placement must be related to educational or occupational goals. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.
COMM

(COMMUNICATION STUDIES)

COMM 1 — Introduction to Public Speaking, 3 units
Formerly listed as: SPCOM 1 — Introduction to Public Speaking
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Principles of oral communication including speech composition and techniques of presenting informal and formal speeches. Emphasis given to organization, delivery, critical thinking, and evaluative listening. Not repeatable. MJC equivalent: (COMM 100) Transfer: (CSU/UC) (CSU-GE: A1) (IGETC: 1C) C-ID: (COMM 110)

COMM 2 — Argumentation and Debate, 3 units
Formerly listed as: SPCOM 2 — Argumentation and Debate
Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
A study of argumentation thru the activity of oral debate. Special consideration will be given to understanding the relationship language has with logic within written forms of argumentation, the relationship language has with various form of reasoning, and the relationships between claims, evidence, and standards of interpreting, writing, and conducting research. Students will complete a minimum of 8,000 words by the end of the semester. Not repeatable. MJC equivalent: (COMM 104 or COMM 107) Transfer: (CSU/UC) (CSU-GE: A3) (IGETC: 1B) C-ID: (COMM 120)

COMM 4 — Introduction to Human Communication, 3 units
Formerly listed as: SPCOM 4 — Introduction to Human Communication
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Course material focuses on the history of the study of human communication, basic research methods for the evaluation of human communication phenomena, and ethical perspectives in communication. Recurrent variables in verbal and non-verbal interaction are traced through the intrapersonal, interpersonal, and multi-personal systems. Not repeatable. MJC equivalent: (COMM 102) Transfer: (CSU/UC) (CSU-GE: A1) (IGETC: 1C) C-ID: (COMM 180)

COMM 5 — Intercultural Communication, 3 units
Formerly listed as: SPCOM 5 — Intercultural Communication
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (COMM 130) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4C) C-ID: (COMM 150)

SPCOM to COMM

Effective as of the 2020-2021 academic year, the Columbia College department of Speech Communication (SPCOM) has renamed the department to Communication Studies and renumbered course IDs. The following crosswalk shows how SPCOM Course IDs map to COMM course IDs.

<table>
<thead>
<tr>
<th>SPCOM 1</th>
<th>COMM 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 2</td>
<td>COMM 2</td>
</tr>
<tr>
<td>SPCOM 4</td>
<td>COMM 4</td>
</tr>
<tr>
<td>SPCOM 5</td>
<td>COMM 5</td>
</tr>
<tr>
<td>SPCOM 7</td>
<td>COMM 7</td>
</tr>
<tr>
<td>SPCOM 9</td>
<td>COMM 9</td>
</tr>
</tbody>
</table>
COMM 7—Forensics Workshop, 3 units
*Formerly listed as: SPCM 7 — Forensics Workshop*
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. 4 completions allowed. MJC equivalent: (COMM 105)
**Transfer:** (CSU) **C-ID:** (COMM 160B)

COMM 9 — Introduction to Small Group and Team Communication, 3 units
*Formerly listed as: SPCM 9 — Introduction to Small Group and Team Communication*
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. **Transfer:** (CSU/UC) (CSU-GE: A1) (IGETC: 1C) **C-ID:** (COMM 140)

COMP
(COMPUTER PROGRAMMING AND INFORMATION SYSTEMS)

COMP 1—Computer Concepts and Information Systems, 4 units
*Formerly listed as: CCTIS 10 — Computer Concepts and Information Systems*
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
This course includes concepts of computer information systems in business, industry and other institutions. Study of computers, security, e-commerce and network communications will also be covered. Application of these concepts and methods through hand-on projects focusing on business problems. Lab applications include operating system, spreadsheets, word processing, database management, multimedia presentations and access to the Internet and World Wide Web. Not repeatable. MJC equivalent: (CSCI 220)
**Transfer:** (CSU/UC) **C-ID:** (ITIS 120)

COMP 3 — Comprehensive Word Processing, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Provides a comprehensive study of word processing and written communications skills for professional and personal applications; reviews basic, intermediate, and advanced word processing skills including tables, mail merge, sorting documents, macros, internet documents, and desktop publishing features for designing brochures and newsletters. Not repeatable. **Transfer:** (CSU)

COMP 5 — Comprehensive Spreadsheets, 3 units
*Formerly listed as: CCTIS 30 — Financial Worksheets on Computers*
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Spreadsheets will be used to develop an 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, charts, tables, 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. Not repeatable. MJC equivalent: (CSCI 223) **Transfer:** (CSU)
COMP 7—Internet Research, 1.5 units

*Formerly listed as:* CCTIS 8 Advanced Internet Research

27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours

Designed to focus on searching and research techniques and tools available via the World Wide Web. The course reviews basic components of Internet search engines and includes subject matter research techniques, database resources and Internet technology skills. Topics include E-Commerce, Internet Resources, Digital Content, and Internet Publications. Not repeatable. **Transfer:** (CSU)

COMP 10—Introduction to Programming, 3.5 units

*Formerly listed as:* CCTPG 5 — Introduction to Programming:

54 Lecture Hours, 27 Laboratory Hours, 108 Out-of-Class Hours = 189 Total Student Learning Hours

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. Write programs using scripting languages such as JavaScript or Python, and a compiled, object-oriented language such as Java. This course is designed for majors and non-majors. Not repeatable. **Transfer:** (CSU/UC) **C-ID:** (COMP 112)

COMP 11J—Programming Concepts and Methodology I (Java), 4 units

*Recommended for Success:* MATH 104 and COMP 10

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. This course will be taught using Java. 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. Not repeatable. **Transfer:** (CSU/UC)

COMP 11P—Programming Concepts and Methodology I (Python), 4 units

*Formerly listed as:* CCTPG 22 — Programming Concepts and Methodology I

*Recommended for Success:* MATH 104 and COMP 10

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. This course will be taught using Python. 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. Not repeatable. **Transfer:** (CSU/UC) **C-ID:** (COMP 112 or COMP 122)
COMP 12J—Programming Concepts and Methodology II (Java), 4 units

**Prerequisite(s):** Completion of COMP 11J or COMP 11P with at least a C or P

**Recommended for Success:** MATH 104

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours

A continuation of Programming Concepts and Methodology I. Problem-solving techniques using an object-oriented design approach. This course will be taught using Java. 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. Not repeatable. **Transfer:** (CSU) **C-ID:** (COMP 132)

COMP 12P—Programming Concepts and Methodology II (Python), 4 units

**Formerly listed as:** CCTPG 24 — Programming Concepts and Methodology II

**Prerequisite(s):** Completion of COMP 11P or COMP 11J with at least a C or P

**Recommended for Success:** MATH 104

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours

A continuation of Programming Concepts and Methodology I. Problem-solving techniques using an object-oriented design approach. This course will be taught using Python. 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. Not repeatable. **Transfer:** (CSU/UC) **C-ID:** (COMP 132)

COMP 29/BUSAD 29—Project Management, 3 units

**Formerly listed as:** CCTIS 29 — Project Management

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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, and risk and procurement management. Credit may be earned for only one of the following: COMP 29 or BUSAD 29. Not repeatable. **Transfer:** (CSU)

COMP 60 — Networking Essentials, 3 units

**Formerly listed as:** CCTSS 11 — Networking Essentials

**Recommended for Success:** COMP 1

36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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 Open System Interconnect (OSI) model including discussions of Local and Wide Area Networks (LAN & 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 Cisco Certified Network Association (CCNA) certification. The topics covered are also applicable to Microsoft Certified Systems Engineer (MCSE) and other industry networking certifications. Not repeatable. **Transfer:** (CSU)

COMP 70 — Database Management, 3 units

**Formerly listed as:** CCTPG 51 — Database Management

**Recommended for Success:** COMP 1

36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. **Transfer:** (CSU)
DRAMA (DRAMATIC ARTS)

DRAMA 10—Introduction to the Theatre, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Provides an introduction to the art of theater, 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 theater and its historical and cultural precedents. Compares live theatre with the electronic forms. Designed to promote the student's greater understanding and enjoyment of theatre as an art form. Field trips may be required. Not repeatable. MJC equivalent: (THETR 100) Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A) C-ID: (THTR 111 or THTR 112)

DRAMA 20 — Oral Expression and Interpretation, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (COMM 120) Transfer: (CSU/UC) (CSU-GE: C1) C-ID: (COMM 170)

DRAMA 42—Acting Fundamentals, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Investigation of techniques and theories prerequisite to theatrical performances; psychological, philosophical, and practical preparation for the actor's art. Not repeatable. MJC equivalent: (THETR 160) Transfer: (CSU/UC) (CSU-GE: C1)

DRAMA 43—Acting and Directing, 3 units
Formerly listed as: DRAMA 43 — Acting-Directing
Recommended for Success: DRAMA 42
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C1)

ECON (ECONOMICS)

ECON 10—Principles of Economics - Macro, 3 units
Prerequisite(s): Completion of MATH 101 or a higher-level math with at least a C or P, or placement through the assessment process
Recommended for Success: MATH 104
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Focus 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. Not repeatable. MJC equivalent: (ECON 101) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4B) C-ID: (ECON 202)

ECON 11—Principles of Economics - Micro, 3 units
Prerequisite(s): Completion of MATH 101 or a higher-level math with at least a C or P, or placement through the assessment process
Recommended for Success: MATH 104
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ECON 102) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4B) C-ID: (ECON 201)

DIGITAL MEDIA
See MEDIA
EDUC (EDUCATION)

EDUC 11—Introduction to Elementary Classroom Teaching, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

This course introduces students to the concepts and issues related to teaching diverse learners in today's contemporary schools, Transition Kindergarten through grade 12 (TK-12). Course requires a minimum of 45 hours of structured fieldwork in public school elementary classrooms. Not repeatable. Transfer: (CSU/UC) C-ID: (EDUC 200)

EDUC 12—Introduction to Education: Intermediate Field Experience, 3 units
Prerequisite(s): Completion of EDUC 11 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Orientation to the teaching profession. Designed for prospective elementary, secondary, special or alternative education teachers, but open to all students. Course requires a minimum of 30 hours 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. This observation-based analysis increases awareness and teaching effectiveness. Not repeatable. Transfer: (CSU)

EDUC 50—Online Course Development, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

This course will emphasize techniques for developing universally designed online learning modules, effective pedagogy for teaching online, including effective teaching practices while demonstrating how to use the course management learning system. Synchronous and Asynchronous communication will be covered to encourage regular and effective communication. Not repeatable. Transfer: (CSU)

EDUC 51—Emerging Technologies for Online Course Development, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

The course will emphasize enhancing the online course environment with accessible, open source and/or low-cost emerging technology tools and objects. Ideas and hands-on practice will be introduced for integrating emerging technologies, e.g., digital and social media to enhance the online learning experience. Not repeatable. Transfer (CSU)

EDUC 52—Universal Design for Online Course Development, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

The course will focus on the implementation of universal design for course content, materials and activities to benefit all learners. Not repeatable. Transfer: (CSU)
EMS
(EMERGENCY MEDICAL SERVICES)

EMS 4 — Emergency Medical Technician Training, 7 units
Prerequisite(s): Completion of EMS 157, or BIOL 10 and BIOL 60 with at least a C or P
Recommended for Success: ENGL 151 or Eligibility for English 1A
108 Lecture Hours, 72 Laboratory Hours, 216 Out-of-Class Hours = 396 Total Student Learning Hours
Materials fee required
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 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. Not repeatable. Transfer: (CSU)

EMS 12 — Pre-Paramedic Training, 8 units
Prerequisite(s): Medical training comparable to EMT certification such as LVN, Combat Medic or Medical Assistant or approval of instructor or EMT certification
144 Lecture Hours, 288 Out-of-Class Hours = 432 Total Student Learning 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, other applicable medical training or instructor approval is required. Two or more years of pre-hospital work experience is strongly recommended. Not repeatable. Transfer: (CSU)

EMS 97 — Work Experience in Emergency Medical Service, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
75 hours paid employment equals 1 unit of credit.
60 hours unpaid employment equals 1 unit of credit.
This 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. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

EMS 107 — Skills Refresher for Emergency Medical Technicians/Emergency Medical Responders, 1.5 units
Formerly listed as: EMS 107 — Skills Refresher for Emergency Medical Technicians and First Responders
Prerequisite(s): Completion of EMS 4 or EMS 157 with at least a C or P or equivalent medical certification level
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours
This instructor-based course meets or exceeds the skills competency and Continuing Education (CE) requirements for the Emergency Medical Technician (EMT) and Emergency Medical Responder (EMR) re-certification. Students will reacquaint themselves with the equipment and skills used by EMTs and/or EMRs in emergency medical situations. The course is designed to update existing EMT and EMR certification as well as provide CE units for EMT and EMR certificated personnel. Not repeatable. Grading: (P/NP only)

EMS 20 — Basic Cardiology and Cardiac Dysrhythmias, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)
EMS 153 — CPR and Basic First Aid, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
A basic course designed for the citizen who wishes to maintain or acquire cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), and basic first aid certification, or who wishes to learn CPR, AED and basic first aid techniques. Successful course completion results in adult, child and infant CPR/AED certification and basic first aid certification. Not repeatable. Grading: (P/NP only)

EMS 157 — Emergency Medical Responder and CPR, 3.5 units
Advisory: Before entering the course, the student should be able to:
A. Use the language of anatomy relative to body orientation and direction, body planes and sections, surface anatomy, body cavities, and the concept of homeostatic mechanisms.
B. Analyze medical terms relating to the body as a whole by defining prefixes, suffixes, word roots, and their meanings.
Recommended for Success: BIOL 150 and/or OFTEC 50
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
An entry-level course designed for firefighters and other emergency workers who will respond to medical emergencies ahead of ambulance transportation. Focuses on stabilization of ill or injured patients prior to arrival of more advanced life support. This course meets the basic requirements for most volunteer fire agencies as well as some paid fire departments. Not repeatable. MJC equivalent: (EMS 350)

EMS 165—Conversational Medical Spanish for Emergency Health Care Providers, 3 units
Recommended for Success: EMS 153 or other medical training
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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, idiomatic expressions and situational phrases used in medical Spanish. Also included will be cultural characteristics of the local population of Spanish speakers. Not repeatable.

EMS 175—EMS Skills Development, 2 units
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable. Grading: (P/NP only)

---

ENGL (ENGLISH)

ENGL 1A—Reading and Composition: Beginning, 3 units
Prerequisite(s): Completion of ENGL 151 with at least a C or P, or placement through the assessment process
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ENGL 101) Transfer: (CSU/UC) (CSU-GE: A2) (IGETC: 1A) C-ID: (ENGL 100)

ENGL 1A:E — Enhanced Reading and Composition: Beginning, 5 units
Prerequisite(s): Placement through the assessment process
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
An enhanced option to ENGL 1A that focuses on the reading, writing, and critical thinking skills necessary to demonstrate competency in college-level composition. Provides a highly structured, intensive, and supportive learning framework with a focus on academic texts and writing expository essays, including a college-level research paper. Includes a required minimum 8,000 words of writing, using proper MLA formatting and documentation. Not repeatable. Transfer: (CSU/UC-Only 3 units are UC transferable. See a counselor.) (CSU-GE: A2) (IGETC: 1A) C-ID: (ENGL 100)

ENGL 1B — Advanced Composition and Introduction to Literature, 3 units
Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 a minimum of 8,000 words in critical essays, employing methods of literary analysis and research, demonstrating further development of reading, critical reasoning, and writing skills. Not repeatable. Transfer: (CSU/UC) (CSU-GE: A3, C2) (IGETC: 1B) C-ID: (ENGL 120)
“Which English class should I start with?”

FOR TRANSFER & ASSOCIATE DEGREES

ENGL 1A
“I’ve always done well in English. I can read a book and write an essay without too much trouble. I think English 1A will help me with my college writing.”

ENGL 1A and ENGL 149
“English is not my best subject. I don’t always remember what I’ve read, and I dread writing essays. I’m going to take English 1A and English 149 so that I have extra time in class and more one-on-one help.”

Important!
Before registering for ENGL 1A or ENGL 1A+ENG 149, you must meet with a counselor for English placement. Call (209) 588-5109 to make an appointment.

ESL COURSE SEQUENCE / English as a Second Language
Students complete ESL assessment to determine initial course placement.

(Noncredit courses)
ENGL 705A ➔ ENGL 705B ➔ ENGL 705C ➔ ENGL 705D ➔ ENGL 705E ➔ ENGL 1A ➔ ENGL 1A + ENGL 149
ENGL 1C—Advanced Composition and Critical Thinking, 3 units

Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ENGL 103) Transfer: (CSU) (CSU-GE: A3) (IGETC: 1B) C-ID: (ENGL 105)

ENGL 10—Creative Writing, 3 units

Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Instruction and practice in writing poetry, fiction, drama, and non-fiction prose, including autobiography, essays, and articles. Analysis of contemporary works with respect to literary techniques. The class employs a workshop format. Not repeatable. Transfer: (CSU/UC) C-ID: (ENGL 200)

ENGL 11—Film Appreciation, 3 units

Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

This course introduces students to the close analysis of film and television. It examines the broad questions of form and content, aesthetics and meaning, and history and culture. It explores the diverse possibilities presented by the cinematic art form through an examination of a wide variety of productions, national cinemas, and film movements. Topics include modes of production, narrative and non-narrative forms, visual design, editing, sound, genre, ideology, and critical analysis. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

ENGL 17 — American Literature: Colonial Period - Late 19th Century, 3 units

Formerly listed as: ENGL 17 — American Literature
Prerequisite(s): Completion of ENGL 1A with at least a C or P
Recommended for Success: ENGL 1B
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ENGL 135) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B) C-ID: (ENGL 130)

ENGL 18 — American Literature: Late 19th Century - Modern Day, 3 units

Formerly listed as: ENGL 18 — American Literature
Prerequisite(s): Completion of ENGL 1A with at least a C or P
Recommended for Success: ENGL 1B
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ENGL 136) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B) C-ID: (ENGL 135)

ENGL 46 — Survey of English Literature: Anglo-Saxon Period - 18th Century, 3 units

Formerly listed as: ENGL 46 — Survey of English Literature
Prerequisite(s): Completion of ENGL 1A with at least a C or P
Recommended for Success: ENGL 1B
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

English literature from the Anglo-Saxons through the 18th Century. Not repeatable. MJC equivalent: (ENGL 137) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

ENGL 47 — Survey of English Literature: 19th and 20th Centuries, 3 units

Formerly listed as: ENGL 47 — Survey of English Literature
Prerequisite(s): Completion of ENGL 1A with at least a C or P
Recommended for Success: ENGL 1B
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

English literature of the 19th and 20th Centuries. Not repeatable. MJC equivalent: (ENGL 138) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

ENGL 49—California Literature, 3 units

Prerequisite(s): Completion of ENGL 1A with at least a C or P
Recommended for Success: ENGL 1B
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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, Jefferson 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)
ENGL 50—Introduction to Shakespeare, 3 units
Prerequisite(s): Completion of ENGL 1A with at least a C or P
Recommended for Success: ENGL 1B
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
An introduction to the representative works by Shakespeare, including the characteristics of the different genres—comedy, history, 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. Not repeatable. MJC equivalent: (ENGL 163) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

ENGL 81—Introduction to World Literature: 1500 to Present, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (ENGL 132) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B) C-ID: (ENGL 145)

ENGL 132—Writing Short Fiction, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
Instruction and practice in writing shorter forms of fiction. Field trips may be required. Not repeatable.

ENGL 133—Writing It Real: Creative Nonfiction, 1 to 2 units
Recommended for Success: ENGL 151
1 Unit: 18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
2 Units: 36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.

ENGL 149 — Reading and Composition Workshop, 2 units
Formerly listed as: ENGL 649 — Writing Skills Workshop
Corequisite(s): Concurrent enrollment in ENGL 1A
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
Individual assistance for students enrolled in ENGL 1A. Students will receive assistance with prewriting, revision, and active reading strategies. The focus will be on supporting students in successful completion of English 1A. Not repeatable. Grading: (P/NP only)

ENGL 151—Preparation for College Composition, 5 units
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning 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. Not repeatable.

ENGL 650—English Fundamentals, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.

The following courses are noncredit and are not applicable for graduation and/or transfer.

ENGL (Noncredit courses in English as a Second Language)

ENGL 705A — English as a Second Language: Low Beginning
Recommended Skill: Basic literacy in first language is recommended
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
Elementary course in speaking, listening, reading, and writing English for persons learning English as another language. Emphasis is on vocabulary and sentence structure for practical communication. 6 completions allowed.

ENGL 705B — English as a Second Language: High Beginning
Recommended for Success: ENGL 705A
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
High beginning course in speaking, listening, reading, and writing English for persons learning English as another language with continued emphasis on practical communication. 6 completions allowed.
ENGL 705C — English as a Second Language: Low Intermediate  
**Formerly listed as:** ENGL 705C — English as a Second Language: Low Intermediate  
**Recommended for Success:** ENGL 705B  
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours  
Low Intermediate ESL course in speaking, listening, reading, and writing English for persons learning English as another language with continued emphasis on practical communication, and an increased emphasis on written skills. 6 completions allowed.

ENGL 705D — English as a Second Language: High Intermediate  
**Recommended for Success:** ENGL 705C  
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours  
High Intermediate ESL course for students who have completed 705C or assessment-tested into this level. Course covers high intermediate reading, writing, and interpretation of various materials. 6 completions allowed.

ENGL 705E — English as a Second Language: Advanced  
**Formerly listed as:** ENGL 705E — English as a Second Language: Proficient  
**Recommended for Success:** ENGL 705D  
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours  
Top level ESL course; student completing this course and scoring a 250 or higher on the Comprehensive Adult Student Assessment Systems (CASAS) test will, based on the ESL instructor’s recommendation, be able to move into a credit ESL course and complete assessment for placement in English courses. 6 completions allowed.

ENTRE (ENTREPRENEURSHIP)

ENTRE 101—Introduction to Entrepreneurship, 2 units  
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.

ENTRE 102—Entrepreneurial Marketing, 2 units  
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.

ENTRE 103—Financial Management for Entrepreneurs, 2 units  
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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, team building, 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. Not repeatable.

ENTRE 104—Preparing Effective Business Plans, 2 units  
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.
ENTRE 105—Social Media Marketing, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.

ENTRE 106—Patents, Copyrights, and Trademarks, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
A study of the requirements and procedures for obtaining and maintaining patent, trademark, copyright protection, and trade secrets. The basics behind intellectual property, and how they relate to the launch of a potential venture. Not repeatable.

ENTRE 107 — Contract Law for Entrepreneurs, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
This course covers the basic contract fundamentals, including formation, repudiation and breach, and remedies. Field trips may be required. Not repeatable.

ENTRE 108 — Negligence Law for Entrepreneurs, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
This course will cover negligence and other tort law applicable to entrepreneurs. Field trips may be required. Not repeatable.

ESC (EARTH SCIENCE)

ESC 5—Physical Geology, 4 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. MJC equivalent: (GEOL 161) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (GEOL 101)

ESC 10—Environmental Geology, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: B1) (IGETC: 5A) C-ID: (GEOL 130)

ESC 23—Historical Geology, 4 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
This course will provide an introduction to the origin, development, and evolution of the earth and its inhabitants. The course covers the 4.5 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. Additionally, impacts of changing landscapes and geologic environments on the history of life will be assessed. 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 both a general science class, intended to satisfy general education requirements for non-majors as well as one of the requirements for geology majors. Not repeatable. MJC equivalent: (GEOL 166) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (GEOL 111)
ESC 33—Introduction to the Earth, 4 units

Recommended for Success: ENGL 1A

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours

This course is intended to provide an introduction to physical earth processes as studied through the disciplines of geology, oceanography, astronomy, and meteorology. 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. Not repeatable. MJC equivalent: (EASCI 161) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (GEOL 121)

ESC 35—Field Geology, .5 to 3 units

Recommended for Success: ENGL 1A

0.5 Unit: 9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
1 Unit: 18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
2 Units: 36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
3 Units: 54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

Contact and Total Student Learning Hours for the following courses:
ESC 35CC, ESC 35DV, ESC 35LS, ESC 35LT, ESC 35LV, ESC 35ML, ESC 35SA, ESC 35SN, ESC 35SP, ESC 35TR, 1 to 3 units

1 Unit: 18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
1.5 Units: 27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours
2 Units: 36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
2.5 Units: 45 Lecture Hours, 90 Out-of-Class Hours = 135 Total Student Learning Hours
3 Units: 54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

ESC 35CC—Geology and Gold Mining of Calaveras County, 1 to 3 units

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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35DV—Geology of Death Valley, 1 to 3 units

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. Not repeatable. Transfer: (CSU)
ESC 35LS—Geology of Lassen, Shasta, Lava Beds, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35LT—Geology of the Lake Tahoe Region, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35LV—Geology of the Long Valley Caldera, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35ML—Geology of the Mother Lode, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35SA—Geology of the San Andreas Fault, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35SN—Geology of the Sierra Nevada, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35SP—Geology of the Sonora Pass Area, 1 to 3 units
A field study of the Sonora Pass region’s selected geologic features and related Earth Science topics. A one- to seven-day field trip will be taken with possible pre- and post-classroom sessions. Field trips required. Not repeatable. Transfer: (CSU)

ESC 35TR—Geology of the Tuolumne River, 1 to 3 units
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. Field trips required. Not repeatable. Transfer: (CSU)

ESC 42—Natural Hazards, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course is intended to provide an introduction to natural hazards as studied through the disciplines of geology, oceanography, astronomy, and meteorology. 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: B1) (IGETC: 5A)

ESC 50—Oceanography, 4 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. MJC equivalent: (EASCI 162) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C)

ESC 62—Meteorology, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: B1) (IGETC: 5A) C-ID: (GEOG 130)
ESL  (English as a Second Language)
See ENGL (English - Noncredit courses in English as a Second Language)

FIRE  (FIRE TECHNOLOGY)

FIRE 1—Fire Protection Organization, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course provides an overview of fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives. Not repeatable. Transfer: (CSU) C-ID: (FIRE 100X)

FIRE 2—Fire Prevention Technology, 3 units
Prerequisite(s): Completion of FIRE 1 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation. Not repeatable. Transfer: (CSU)

FIRE 3—Fire Protection Equipment and Systems, 3 units
Prerequisite(s): Completion of FIRE 1 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course provides information relating to the features of design and operation of fire alarm systems, water-based suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Field trips may be required. Not repeatable. Transfer: (CSU) C-ID: (FIRE 120X)
FIRE 4—Building Construction for Fire Protection, 3 units
Prerequisite(s): Completion of FIRE 1 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course provides the components of building construction related to firefighter and life safety with an emphasis on firefighter safety on new construction. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at an emergency scene. The development and evolution of building and fire codes will be studied in relation to past fires in residential, commercial, and industrial occupancies. Not repeatable. Transfer: (CSU) C-ID: (FIRE 130X)

FIRE 5—Fire Behavior and Combustion, 3 units
Prerequisite(s): Completion of FIRE 1 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

FIRE 7—Wildland Fire Control, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course aligns with S-290 Intermediate Fire Behavior of the National Wildfire Coordinating Group (NWCG). This course provides professional development related to the topic of wildland fire behavior. This course provides instruction in the identification and prediction of wildland fire behavior in various fuel types and under varying weather conditions. Prepares municipal, county, state, and federal fire personnel to meet certification standards set forth by the National Inter-agency Incident Management System Field trips may be required. Not repeatable. Transfer: (CSU)

FIRE 29A—Driver/Operator Training 1A, 1 unit
Prerequisite(s): Completion of FIRE 101 with at least a C or P, or Firefighter I Certificate, or Volunteer Firefighter certification, or equivalent
10.8 Lecture Hours, 28.8 Laboratory Hours, 22 Out-of-Class Hours = 61.6 Total Student Learning 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. Not repeatable. Transfer: (CSU)

FIRE 29B—Driver/Operator Training 1B, 1 unit
Prerequisite(s): Completion of FIRE 29A with at least a C or P, or Firefighter I Certificate, or Volunteer Firefighter certification or equivalent
10.8 Lecture Hours, 28.8 Laboratory Hours, 22 Out-of-Class Hours = 61.6 Total Student Learning Hours
Designed to provide the student with information and skills on Pump Techniques and Operations including basic inspection and maintenance. Not repeatable. Grading: (P/NP only) Transfer: (CSU)

FIRE 50 Low Angle Rope Rescue, 1.5 units
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours
Materials fee required
The Low Angle Rope Rescue Operational course is designed to provide training for responders in low angle rope rescue operations. These over-the-side operations may be the result of a vehicle accident, hiking mishap, swift water rescue, or search and rescue function in an urban or remote area. This course will also provide training in a subject element required for the California Urban Search and Rescue (US&R) Basic and Light Operational Level by serving as the prerequisite training if you wish to continue your training in a Rescue Systems 1 course. Rescue Systems 1 prepares you for light frame building collapse incidents caused by earthquake, terrorist actions, weapons of mass destruction (WMD) event, or other catastrophe. 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. The Low Angle Rope Rescue Operational course is a 24-hour course taught in a three-day format. Students will be grouped by squad, team, company, or other similar configuration. Each class session will begin on time, and your attendance is mandatory. Not repeatable. Grading: (P/NP only) Transfer: (CSU)

FIRE 51—High Angle Rope Rescue, 1.5 units
Prerequisite(s): Completion of FIRE 50 with at least a C or P
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours
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. Field trips required. Not repeatable. Grading: (P/NP only) Transfer: (CSU)
FIRE 97—Work Experience in Fire Technology, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only)
Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

FIRE 101—Firefighter I Academy, 16 units
Prerequisite/Corequisite: Completion of EMS 157 and HHP 55 with at least a C or P, or concurrent enrollment in EMS 157 and HHP 55
144 Lecture Hours, 432 Laboratory Hours, 288 Out-of-Class Hours = 864 Total Student Learning Hours
This course is designed for students who desire to enter the firefighting field and meets requirements, units A-X, for the California State Firefighter 1 certification. Completion of this course includes sitting for the State Firefighter 1 exam. 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 (179), 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. Not repeatable.

FIRE 111—Basic Power Saw Safety, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
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. Not repeatable.

FIRE 120—Fire Operations in the Urban Interface, 1.5 units
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours
This course addresses content in initial attack incident command and control of wild land fire that threatens life, property and improvements. Not repeatable.

FIRE Agency Courses
Columbia College partners with local emergency service agencies to provide in-service training for current employees. The courses listed in this section may be offered by the college on campus. More commonly, these courses are taught on behalf of the college by an employee of an emergency service agency meeting minimum qualifications to do so. Interested agencies should contact the Dean of Career Technical Education at 209 588-5142 to learn more.

FIRE 270BI—Firefighter (Seasonal) Re-Hire Training, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
Designed for returning seasonal firefighters. Re-certification on legally mandated subjects including EMS, Hazardous Materials, and Sexual Harassment will be covered. Additional topics rotate on a yearly basis and cover current issues related to structural and wildland firefighting. Not repeatable. Grading: (P/NP only)

FIRE 270BJ—CAL FIRE Continued Professional Training, 1.5 units
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours
This course is designed for CAL FIRE permanent personnel. Recertification on legally mandated subjects including EMS, Hazardous Materials, and Sexual Harassment will be covered. Additional topics rotate on a yearly basis and may cover current issues related to structural firefighting, rescue, hazardous materials, finance, leadership, health, safety and wildland firefighting. Not repeatable. Grading: (P/NP only)
FIRE 270BT — S-290 Intermediate Wildland Fire Behavior, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
This is a course designed to prepare the prospective fireline supervisor to undertake safe and effective fire management operations. It is the second course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Fire environment differences are discussed as necessary; instructor should stress local conditions. Field trips required. Not repeatable. Grading: (P/NP only)

FIRE 270CI — S-330 Strike/Task Force Leader, 1 unit
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
This course is designed to meet the training requirements outlined in NIMS: Wildland Fire Qualification System Guide, PMS 310-1 and the position task books developed for the positions of Task Force Leader and Strike Team Leader. Most examples and exercises in this course are specific to wildland fire suppression, although some all-hazards exercises are included. Not repeatable. Grading: (P/NP only)

FIRE 270CK — S-339 Division/Group Supervisor, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
Designed for those interested in advancing knowledge and skill sets to better supervision, management and leadership techniques. This course teaches the student the management skills necessary to fill the position of Division/Group Supervisor within the framework of ICS. It does not teach tactics or strategy and refers to these only to enhance the particular management technique associated with them. Not repeatable. Grading: (P/NP only)

FIRE 270DN — CAL FIRE Basic Firefighter 1, 9 units
162 Lecture Hours, 324 Out-of-Class Hours = 486 Total Student Learning Hours
This rigorous twenty five days of training is specifically for those seeking a seasonal firefighter job with CAL FIRE. Graduates of this Academy also meet the minimum wildland fire training requirements needed to apply for seasonal wildland fire control positions with most other fire agencies in California. Certificates issued upon completion of the Academy will include: CAL FIRE Basic Firefighter, 179 Hour CSTI Hazardous Materials First Responder Operations SFM Confined Space Rescue Awareness SFM Firefighter Survival NWCG S-130 Firefighter Training NWCG S-190 Intro to Wildland Fire Behavior NWCG L-180 Human Factors in the Wildland Fire Service Public Safety First Aid with CPR/AED. Not repeatable. Grading: (P/NP only)

FIRE 270EI — CAL FIRE Basic Firefighter 1, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
This course is designed to provide entry-level firefighters with basic wildland firefighting skills. Not repeatable. Grading: (P/NP only)

FIRE 270EM — Special Topics: Power Saw Safety, .5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
This is an instructor-led course intended to be presented at the local level. The course lessons provide introduction to the function, maintenance and use of internal combustion engine powered chain saws, and their tactical wildland fire application. Field exercises support entry level training for firefighters with little or no previous experience in operating a chain saw, providing hands-on cutting experience in surroundings similar to fireline situations. Not repeatable. Grading: (P/NP only)

FIRE 270EP — S-230 and S-231 Crew Boss/Engine Boss, 2.5 units
45 Lecture Hours, 90 Out-of-Class Hours = 135 Total Student Learning Hours
Introduction to operational leadership, mobilization, arrival at the incident, risk management, entrapment avoidance, safety and tactics, off line duties, demobilization and post incident responsibilities. Not repeatable. Grading: (P/NP only)

FIRE 270EQ — Joint Basic Fire Academy, 9 units
162 Lecture Hours, 324 Out-of-Class Hours = 486 Total Student Learning Hours
This course is designed to educate the student on safe and proper basic firefighting techniques. This course meets the firefighting requirements for National Fire Protection Association (NFPA®) 1001, Standard for Firefighter Professional Qualifications (2019 edition), Firefighter Levels I and II. Field trips may be required. Not repeatable. Grading: (P/NP only)

FIRE 270ER — Fire Control 6, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
This course provides information, methods, and techniques for the utilization of the California Fire and Rescue Mutual Aid Plan, Incident Command System, wildland fire fighting strategy and tactics, structure triage, terminology, survival skills and operating safely in a wildland firefighting incident. Field trips required. Not repeatable. Grading: (P/NP only)
COURSES: FNR

**Foreign Language**

*See SPAN (Spanish)*

**FNR**

(FORESTRY AND NATURAL RESOURCES)

**FNR 1 — Natural Resource Conservation**, 3 units

*Formerly listed as: FNR 1 — Environmental Conservation*

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Practices of natural resources conservation with current topics on forestry, range management, watershed management, climate change, endangered species, environmental pollution, wilderness management, energy, population, and the range of California’s natural resources. History of the conservation movement. Field trips may be required. Not repeatable. **Transfer:** (CSU/UC) (CSU-GE: D)

**FNR 2 — Introduction to Forestry**, 3 units

36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours

Overview of the objectives and methods of sustainable forest management, including significant forest history events, U.S. forest regions, forest ecology, forest products, forestry practices, forestry education pathways, career opportunities, certifications, and ethics. Field trips required. Not repeatable. **Transfer:** (CSU)

**FNR 3 — Natural Resources Law and Policy**, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Field trips may be required. Not repeatable. **Transfer:** (CSU)

**FNR 6 — Soil Resources**, 3 units

*Recommended for Success: CHEM 5*

36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours

Introduction to physical, chemical, and biological properties of soils. Soil development, type, and analysis. Implications and applications for natural resources management. **Transfer:** (CSU/UC) (CSU-GE: B1) (IGETC: 5A)

**FNR 9 — Parks and Forests Law Enforcement**, 2 units

36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours

Constitutional, criminal, and civil law as related to law enforcement activities conducted by resource agencies. Field trips may be required. Not repeatable. **Transfer:** (CSU)

**FNR 10 — Dendrology**, 3 units

36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours

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. Not repeatable. **Transfer:** (CSU)

**FNR 11 — Natural Resources Field Camp**, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Field trips required. Not repeatable. **Transfer:** (CSU)

**FNR 12 — Tallest, Oldest, Largest**, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

California is home to the tallest (Coast Redwood), the oldest (Bristlecone Pine), and the largest (Giant Sequoia) trees in the entire world. This field course takes students to all three. The botany, natural history, management, and cultural history of these trees are explored. Field trips required. Not repeatable. **Transfer:** (CSU)

**FNR 22 — Ecology and Use of Fire in Forest Ecosystems**, 3 units

36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours

Introduction to the ecology and management of fire in California landscapes. Selected topics include the effects of fire on vegetation, soils, hydrology, wildlife, air quality, and aesthetics; 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. Not repeatable. **Transfer:** (CSU)
FNR 24—Fire-Fuels Management, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Transfer: CSU

FNR 30—Introduction to Watershed Management, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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)

FNR 50—Natural History and Ecology, 3 units
54 Lecture Hours, 108 Out-of-Class = 162 Total Student Learning 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 required. Not repeatable. Transfer: (CSU)

FNR 53—Forest Surveying, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Objectives and methods of forest surveying. Use of basic forest surveying instruments. Application of hand and staff compass, engineer's tape, clinometer, levels, engine's transit, and total station. Field recording techniques, laboratory computations and map drafting. Field trips may be required. Not repeatable. Transfer: (CSU)
COURSES: FNR

FNR 60 — Introduction to Maps, 2 units
Formerly listed as: FNR 60 — Introduction to Maps and Remote Sensing
18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning Hours
Interpretation and use of maps and aerial photography commonly used in natural resources management. Emphasis on map features, coordinate systems, topography, land cover, resource management, and navigation. Field trips required. Not repeatable. Transfer: (CSU)

FNR 61 — Introduction to Water Resources Management, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course explores the many uses of water including hydropower, food production, domestic use, sanitation, transportation, ecosystem function, and recreation. The physical and chemical properties of water, watershed management, conservation, drinking and wastewater treatment, reservoir management and watershed restoration are also covered. Not repeatable. Transfer: (CSU)

FNR 62 — Applied Forest Inventory and Management, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Techniques of forest inventory and management including forest surveys, timber cruising, and scaling; data collection and analysis; location and delineation of forest properties and resources; and survey and management of other natural resources. Field trips required. Not repeatable. Transfer: (CSU)

FNR 63 — Drinking Water Treatment, 3 units
Formerly listed as: FNR 63 — Water for Consumption
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Field trips may be required. Not repeatable. Transfer: (CSU)

FNR 64 — Water Infrastructure in California, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Water infrastructure in California. Water sources, diversions, conveyances, reservoirs, pump stations, Central Valley Project, State Water Project, PG&E. Not repeatable. Transfer: (CSU)

FNR 67 — Operation of Wastewater Treatment Plants I, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Practical aspects of operating and maintaining wastewater treatment plants, emphasizing the use of safe practices and procedures. Includes the role and responsibilities of a treatment plant operator, an explanation of why wastes must be treated, and descriptions of the equipment and processes used in a wastewater treatment plant. This course is worth 9 CEUs. Field trips may be required. Not repeatable. Transfer: (CSU)

FNR 69 — Operation of Wastewater Treatment Plants II, 3 units
Formerly listed as: FNR 69 — Operation of Wastewater Treatment Plants 2
Recommended for Success: FNR 67
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Field trips may be required. Not repeatable. Transfer: (CSU)

FNR 71 — Water Use Efficiency, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
Covers the general knowledge requirements expected for Level 1 American Water Works Association California/Nevada Section Water Use Efficiency Practitioner Certification, focusing on water end uses and conservation measures and on regional water issues and resources. Not repeatable. Transfer: (CSU)

FNR 74 — Wastewater Collection Systems, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course trains operators in the practical aspects of wastewater collection system operation and maintenance, emphasizing safe practices and procedures, the role and responsibilities of the collection system operator, the need for collection systems, the typical components and design of collection systems, safe procedures for working in traffic, confined space entry, excavation and shoring, inspecting and testing sewers, and completing underground repairs and construction. This class helps students prepare for State Wastewater Certification Exams. Not repeatable. Transfer: (CSU)
FNR 81—California Wildlife, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

FNR 83 — Ecological Restoration, 1 unit
Formerly listed as: FNR 183 — Ecological Restoration
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
A field lecture course on ecological restoration. 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, as well as, restoration techniques, implementation, and monitoring. Not repeatable. Transfer: (CSU)

FNR 86—California Naturalist Certification, 1.5 units
27 Lecture Hours, 18 Laboratory Hours, 54 Out-of-Class Hours = 99 Total Student Learning Hours
Materials fee required
This course satisfies the course requirements to become a California Certified Naturalist. Classroom and field experience in California natural history, communication training, and community service. Field trips required. Not repeatable. Transfer: (CSU)

FNR 97—Work Experience in Forestry and Natural Resources, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

FNR 114–Trail Construction and Maintenance, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours

FNR 150–Excavator Mulcher Operation, 2 units
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours = 108 Total Student Learning Hours
Materials fee required
Operation of tracked excavator with forestry mulcher attachment for use in fire-fuels reduction and vegetation management. Safety, regular maintenance, and operation of excavator platform and forestry mulcher head. Field trips may be required. Not repeatable.

FNR 172—Nature Photography, 1.5 units
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning 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. Field trips may be required. Not repeatable. Grading: (P/NP only)

FNR 173—Drawing Nature, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
An introduction to drawing nature, including basic concepts and terminology used to organize, name, and describe the diversity of living and non-living natural features, as well as basic techniques of observing and drawing natural features. Not repeatable.

FNR 174 — Nature Journaling, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Our natural curiosity for the environment makes us excellent candidates for nature journaling. It is an engaging and fun activity that fosters a deeper understanding of the environment’s natural processes. This understanding is essential to developing better research skills and an important asset in building a deeper appreciation of the environment and an understanding of critical resource issues in our world today. Not repeatable.
COURSES:  FNR - GEOGR

FNR 175—Photographic Storytelling in the Sierra Nevada, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Creating a photographic narrative of natural features of the Sierra Nevada through the development of each student's unique personal vision. Field sessions are followed by lectures, demonstrations, critiques and creation of student portfolios. Instruction is in the classroom and the field. Digital cameras and tripods required. Macro lenses and telephoto lenses recommended. Field trips required. Not repeatable. Grading: (P/NP only).

FNR 182—Techniques of Surveying Sierra Nevada Wildlife, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
A technical, applied, field course on the methods of surveying and monitoring Sierra Nevada mammals, raptors, songbirds, reptiles, and amphibians. Topics include field identification of pelage, tracks, plumage, life cycle, geographic ranges, habitat, ecological niche, field signs, behavioral patterns, and State and Federal listed status, as well as use of track plates, hair snare systems, and wildlife cameras. Not repeatable. Grading: (P/NP only).

FNR 184 — Field Ornithology, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
A field lecture course to train and inform college students, land management professionals, environmental consultants, and community members on bird field studies. Natural resource topics covered include the value of monitoring birds to assess environmental health, how to monitor birds in the field, bird identification by sight and sound, and current bird population monitoring programs. This course also includes instruction on how to search for and obtain jobs and internships conducting ornithological field studies. Field trips required. Not repeatable. Grading: (P/NP only)

FNR 187 — Edible and Medicinal Plants, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
How to find, identify, and prepare edible and medicinal plants of the Sierra Nevada. Field trips required. Not repeatable.

FNR 190—Climate Stewardship, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
This course satisfies the requirement to become a California Certified Climate Steward. Classroom and field experience in California natural history, local and global effects of our changing climate, communication training and community service. Not repeatable.

GEOGR 12—Cultural Geography, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Examines humankind's relationship with the environment using multidisciplinary perspectives and techniques. Historical and contemporary patterns of cultural-enviro adaptations, the landscape of cultural diversity, demography and mobility, political organization, the process of urbanization, and economic organization will be emphasized. Not repeatable. MJC equivalent: (GEOG 102) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4E) C-ID: (GEOG 120)

GEOGR 15—Physical Geography, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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, using the tools of cartography, specifically all forms of mapping, GIS, GPS, and graphic presentations. Emphasis on the interrelationships between physical and human processes. The study of the earth as the home of man. Not repeatable. MJC equivalent: (GEOG 101) Transfer: (CSU/UC) (CSU-GE: B1) (IGETC: 5A) C-ID: (GEOG 110)

GEOGR 20—World Regional Geography, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Survey of the world's culture regions and nations as interpreted by geographers, including physical, cultural, and economic features. Emphasis on spatial and historical influences on population growth, transportation networks, and natural environments. Identification and importance of the significant features of regions. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4E) C-ID: (GEOG 125)

GEOGR 59 — Geographic Information and Global Positioning Systems, 2 to 3 units
2 Units: 36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
3 Units: 54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to maps, images and geographic techniques. Technologies include map and aerial photograph interpretation, tabular data, spatial statistics, cartography, Global Positioning Systems (GPS), Internet mapping, remote sensing and Geographic Information Systems (GIS) that aid in data collection, analysis and presentation. Not repeatable. Transfer: (CSU/UC)
GEOGR 60 — Introduction to Geographic Information Systems, 3 units
Formerly listed as: GEOGR 60 — Introduction to GIS-ArcView
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Identification and acquisition of GIS data. Assessment of vector and raster systems, scale, resolution, map projection, coordinate systems, georeferencing and Global Positioning Systems (GPS). Spatial analysis and modeling with GIS. Not repeatable. MJC equivalent: (GEOG 109) Transfer: (CSU/UC)

GEOGR 61 — Introduction to GIS Incident Mapping, 1 unit
Formerly listed as: GEOGR 61 — GIS Mapping – Introduction to Fire Incident Mapping
Recommended for Success: COMP 7
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
Students who take this course will learn how to apply their GIS skills in both Fire and Search and Rescue (SAR) incident mapping. Students will learn incident symbology, data standards and organization, incident map products, and responsibilities of a GIS technician. Additionally, students will collaborate with teammates in an incident simulation to utilize GPS data collected, convert the data to shapefiles, and create incident map products. Not repeatable. Grading: (P/NP only) Transfer: (CSU)

GEOGR 63 — Creating a Basic GIS Map, 1 unit
Formerly listed as: GEOGR 63 — GIS and Making Maps: The Essential Skills
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
This course will teach the skills and tools to use ArcGIS/ArcPro mapping software to create maps. It will be useful to anyone wanting a quick "how to" for using the industry standard ArcGIS/ArcPro to make, and edit, a map. This course is intended as a resource for geography students, emergency responders, outdoor enthusiasts, and anyone else interested in acquiring basic skills with maps and geospatial information. Not repeatable. Grading: (P/NP only) Transfer: (CSU)

GEOGR 66 — Web Mapping, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
This course focuses on the fundamental principles of web mapping and creating web mapping applications. Students will learn the basics of Web GIS system architecture, geospatial web services, web service based geoprocessing. In addition, students will also learn about mobile GIS solutions by collecting data and creating a web-based storymap. Not repeatable. Grading: (P/NP only) Transfer: (CSU)
**COURSES: GEOGR - GUIDE**

**GEOGR 68 — UAV/Drone Mapping, 3 units**
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Industry is using Unmanned Aerial Vehicles (UAV’s)/Drones in GIS, surveying and mapping, forestry, natural resources, earth sciences, agriculture, real estate, construction, filming and cinematography, utilities inspections, and more. This course will teach theory and concepts related to mapping and photogrammetry, flight safety and operations, licensing and legal issues, 3D modeling, and software and hardware concepts. This course is part of the UAV/Drone Mapping Micro-credential Skills Attainment Certificate. Not repeatable. **Transfer:** (CSU)

**GEOGR 70 — Introduction to Raster-Based GIS, 3 units**
Recommended for Success: GEOGR 59 and GEOGR 60
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

This course uses ArcGIS/ArcPro software to explore the use of raster GIS data in analysis and visualization. Topics include terrain analysis, density mapping, distance/direction/allocation surfaces, interpolation, visibility analysis, and 3D modeling. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Not repeatable. **Transfer:** (CSU)

**GEOGR 75 — Introduction to Remote Sensing, 3 units**
Recommended for Success: GEOGR 70
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Materials fee required

Uses ArcGIS/ArcPro software to explore the use of GIS in remote sensing. Emphasis is on the use of satellite imagery, aerial photography, and UAV/Drone data to derive information for GIS analysis and decision-making. The course consists of a combination of lectures, demonstrations, hands-on exercises, and a student project. Not repeatable. **Transfer:** (CSU)

**GEOGR 97 — Work Experience in Geography, 0.5 to 4 units**
0.5 Unit: 30 Unpaid Hours, 37.5 Paid Hours
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours

75 hours paid employment equals 1 unit of credit
60 hours unpaid employment equals 1 unit of credit

This provides students an opportunity to experience supervised employment in Geography. The student's employment must be related to educational or occupational goals. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) **Transfer:** (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

**GUIDE (GUIDANCE)**

**GUIDE 1 — Career/Life Planning, 3 units**
Recommended for Success: ENGL 151
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Materials fee required

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. Not repeatable. **Transfer:** (CSU) (CSU-GE: E)

**GUIDE 8 — Introduction to College, 0.5 to 1 unit**
0.5 Unit: 9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
1 Unit: 18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

Explore the resources and tools needed to take charge of your educational experience and maximize your academic success. Identify successful college behaviors, Columbia College support resources, general expectations of college culture, and college pathway options. Students will gain an understanding of educational planning and transfer processes and, according to their needs and goals, each student may complete an educational plan with a counselor individually, in a group, or online. Not repeatable. **MJC equivalent:** (GUIDE 110) **Transfer:** (CSU)

**GUIDE 10A — Introduction to Helping Skills, 1.5 units**
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning 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 listening and communication skills. Designed for non-professional and paraprofessional helpers such as peer tutors, peer counselors, advisors, managers, supervisors etc. Not repeatable. Grading: (P/NP only) **Transfer:** (CSU)
GUIDE 10B — Intermediate Helping and Basic Conflict Management Skills, 1.5 units

Prerequisite(s): Completion of GUIDE 10A with at least a C or P
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning 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 helping and support skills and the 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. Not repeatable. Grading: (P/NP only) Transfer: (CSU)

GUIDE 11—Occupational Exploration, 1 unit

18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

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. Not repeatable. MJC equivalent: (GUIDE 111) Transfer: (CSU)

GUIDE 18 — Life Skills for Higher Education, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

This course presents strategies for first-year students to thrive in the culture of higher education. By taking a holistic approach to college success, educational planning, and lifelong learning, students will develop self-understanding as they examine topics such as: motivation and attitudes, values, goal setting, creative and critical thinking, stress management, personal wellness, learning and personality theories, time management, study skills, interpersonal communication, cultural diversity, college expectations and etiquette, and how to build a community for academic and personal support. An educational plan is a course requirement. Not repeatable. Satisfies MJC Guidance requirement. Transfer: (CSU/UC) (CSU-GE: E)

GUIDE 25/BUSAD 25 — Job Search and Interviewing Strategies, 1 unit

18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

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. Not repeatable. MJC equivalent: (GUIDE 112) Transfer: (CSU)

GUIDE 30 — Personal Growth and Development, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Examination of personal and psycho-social dynamics and influences for personal growth and self-management. Focus is on self-exploration, leading to self-awareness and self-understanding, examining motives behind choices, coping with changes, relationships, dynamics and resolution of conflicts, and the role of cognition and emotions in behavior and health; includes active personal involvement, class interaction, case studies, building personal portfolios, and self-study. Field trips may be required. Not repeatable. Satisfies MJC Guidance requirement. Transfer: (CSU) (CSU-GE: E)

GUIDE 35 — Basics of Budgeting & Money Management, 1 unit

18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

This course provides students with the fundamental tools to make informed decisions that impact their short and intermediate-term finances. Topics covered include money management and the decision processes and behaviors underlying spending, saving and borrowing. Not repeatable. Transfer: (CSU)

GUIDE 50 — Guidance for Nursing Majors, 1 unit

18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

Course will familiarize Columbia College students with the MJC Associate Degree in Nursing Program and will also cover requirements for transfer into baccalaureate level nursing programs. Important aspects of nursing as an occupational choice will be covered as well as resources available to promote student success. Field trips may be required. Not repeatable. Satisfies MJC Guidance requirement. Transfer: (CSU)
GUIDE 51—Principles of Leadership, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours

Designed to introduce students to the dynamics of working groups and the impact of leadership on work groups. Students will explore leadership theories and models as well as their own values and beliefs to develop a personal leadership philosophy. Topics may include developing skills in principles and administration of parliamentary law; the co-curricular activity program; finances, including budgetary procedure. Not repeatable. Transfer: (CSU)

GUIDE 52 — Guidance for STEM Majors, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours

Course will familiarize Columbia College students with the STEM Associate Degrees and will also cover requirements for transfer into baccalaureate level STEM majors. Important aspects of STEM as an occupational choice will be covered as well as specific study strategies and resources available to promote student success. Satisfies MJC Guidance requirement. Not repeatable. Transfer: (CSU)

GUIDE 100 — College Success, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Materials fee required

Prepares students for the challenges of college-level coursework. Designed for students who would like to develop or improve skills and abilities necessary for college success; such as students who are: new to college, re-entering college, or those on academic or progress probation status. Topics include: values, goal-setting methods, time management, note-taking techniques, 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. Not repeatable. MJC equivalent: (STSK 78)

HHP

(HEALTH AND HUMAN PERFORMANCE)

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

HHP 2—Women’s Health Issues, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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; temporary 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D, E) (IGETC: 4D)

HHP 3 — Introduction to Kinesiology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) C-ID: (KIN 100)

HHP 5—Introduction to Recreation and Leisure, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 Health and Human Performance (Recreation-related subjects). Not repeatable. Transfer: (CSU) (CSU-GE: E)

HHP 8A—Aerobic Exercise I, 1 unit

54 Laboratory Hours = 54 Total Student Learning Hours

Provides an introduction to cardiovascular conditioning with an emphasis on the fundamental principles of exercise as a component of health. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 8B—Aerobic Exercise II, 1 unit

Formerly listed as: HHP 8B — Step Aerobics
54 Laboratory Hours = 54 Total Student Learning Hours

Designed to improve cardiovascular endurance with an emphasis on step aerobics as a component of health. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)
HHP 9 — Circuit Cross-Training, 1 unit

54 Laboratory Hours = 54 Total Student Learning Hours
Provides an introduction to circuit training, cross training, and interval training using various combinations of cardiovascular and muscle strength/endurance exercises to achieve personal fitness goals. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 10 — Adaptive Physical Education, 1 unit

Enrollment limited to: Open to all students who are capable of profiting from the instruction offered. To profit, students must be able to demonstrate basic safety skills; follow a workout program with minimal support from instructors and staff; participate in all aspects of the course, up to their level of ability; show progress toward course outcomes and objectives; demonstrate the ability to accept personal responsibility for their actions; and adhere to the Columbia College Student Code of Conduct. Students must complete an assessment prior to enrollment to ensure they are capable of profiting from the course. Students will only need to complete this assessment once and will not need to do so in future semesters.

54 Laboratory Hours = 54 Total Student Learning Hours
Provides direction for students with physical limitations to follow a prescribed program on improving cardiovascular, flexibility, and strength fitness levels. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 16A—Fitness Walking, 1 unit

54 Laboratory Hours = 54 Total Student Learning Hours
Provides an introduction and instruction to fitness walking along with other exercises to improve whole-body fitness. It is a low-impact activity course with emphasis on cardiovascular endurance and weight loss. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 16B—Power Walking, 1 unit

Recommended for Success: HHP 16A
54 Laboratory Hours = 54 Total Student Learning Hours
Provides instruction and techniques for power (race) walking. Emphasis is on cardiovascular endurance and efficiency through moderate-to-high intensity workouts. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 18A—Yoga I, 1 unit

54 Laboratory Hours = 54 Total Student Learning Hours
Designed to provide a basic yoga foundation using postures, breathing and relaxation techniques to increase flexibility, strength, balance and coordination. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)
COURSES: HHP

HHP 47C—Soccer III, 1 unit
Recommended for Success: HHP 47B
54 Laboratory Hours = 54 Total Student Learning Hours
Provides advanced instruction, practice and participation in game play. Course emphasis on skills and strategies for the experienced player. Defensive concepts surrounding zonal versus man-to-man strategies are included. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 50A—Tennis I, 1 unit
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 50B—Tennis II, 1 unit
Prerequisite(s): Completion of HHP 50A with a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 53A—Volleyball I, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
Basic techniques with emphasis on offensive and defensive tactics of team play. Rules and intra-class competition included. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 53B—Volleyball II, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
An intermediate level of skills and strategies for the experienced player; an introduction to power volleyball play. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 53C — Volleyball III, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
An advanced level of skill and strategies for the experienced volleyball player. Intra-class power play competition included. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)
HHP 55—Fitness Training for Firefighting, 1 unit
Formerly listed as: HHP 55A — Fitness Training I for Firefighting
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. Transfer: (CSU)

HHP 56A—Weight Training I, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
Instruction in use of weights and body building equipment with emphasis upon individual program development. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 56B — Weight Training II, 1 unit
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 59A — Beginning Tai Chi, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
Provides an introduction to Tai Chi. Emphasis will be on the Yang style short form, 21 movements. Course also includes exploration of Qi Kung exercises and the history of Tai Chi. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 59B — Advanced Tai Chi, 1 unit
Prerequisite(s): Completion of HHP 59A with at least a C or P or Instructor approval of specific experience of Yang Style Form. 54 Laboratory Hours = 54 Total Student Learning Hours
A continuation of Tai Chi Chuan Yang style form. Included will be a short review of Tai Chi history and basic principles of practice. The short form will be continued from movement 21 through movement 99, and will continue to completion of the long form with movement 150 if possible. Some demonstration of push hand techniques and long wooden sword form will be included. Students will be expected to lead the class in form demonstration and warm-up exercises. Not repeatable. Transfer: (CSU/UC)

HHP 60 — Health and Fitness Education, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course focuses on personal and community health and an exploration of contemporary health issues and problems, with an emphasis on personal fitness and adjustment. Topics include exercise, nutrition, weight control, mental health, stress management, substance abuse, reproductive health, disease prevention, aging, health care delivery, and environmental hazards and safety. Not repeatable. MJC equivalent: (HE 101) Transfer: (CSU/UC) (CSU-GE: E) C-ID: (PHS 100)

HHP 62 — Safety and First Aid Education, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Provides instruction on the theory and skills involved with the immediate and temporary care of the injured. Emphasis will be on learning how to assess a victim’s condition and proper treatment. Provides the concepts of Mental Health First Aid. Provides individual and group safety measures including, but not limited to preparation for a natural disaster, electrical safety and emergency action plans. The American Red Cross Standard First Aid, CPR, and AED certification for Infant/Child/Adult may be granted upon satisfactory completion for an additional fee. Not repeatable. MJC equivalent: (HE 101) Transfer: (CSU/UC) C-ID: (KIN 101)

HHP 63—Sociology of Sport, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4J)

HHP 76—Sports Conditioning, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
This course is designed for the athlete or student wanting to participate in a vigorous training program to train for athletic competition. Components will include muscle strength, muscle endurance, cardiovascular endurance, and flexibility. Concepts of speed, power, and quickness will also be emphasized. 4 completions allowed. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 82—Varsity Basketball (Men), 1.5 units
81 Laboratory Hours = 81 Total Student Learning Hours
Preparation and training for intercollegiate varsity basketball competition. Participation in contests with other colleges will be scheduled. Field trips required. 4 completions allowed. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)
COURSES: HHP

HHP 86—Varsity Volleyball (Women), 3 units
162 Laboratory Hours = 162 Total Student Learning Hours
Preparation and training for intercollegiate varsity volleyball competition. Participation in contests with other colleges will be scheduled. Field trips required. 4 completions allowed. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 94A—Swimming I, 1 unit
Recommended for Success: Students should be able to complete one length of the pool without assistance
54 Laboratory Hours = 54 Total Student Learning Hours
Provides an introduction to the application of mechanical and anatomical principles of aquatics for beginning swimmers. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

HHP 94B—Swimming II, 1 unit
Recommended for Success: HHP 94A Swimming I
54 Laboratory Hours = 54 Total Student Learning Hours
Provides an introduction to the application of mechanical and anatomical principles of aquatics for intermediate swimmers, with an emphasis on the four competitive swim strokes and increasing cardiorespiratory endurance. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.)

The following courses are noncredit and are not applicable for graduation and/or transfer.

HHP (Noncredit courses in Health and Human Performance)

HHP 300 — Lifelong Health and Fitness
54 Laboratory Hours = 54 Total Student Learning Hours
Provides lifelong education for older adults and promotes the health and physical well-being through various combinations of training systems to improve cardiovascular endurance and muscular strength and endurance. Unlimited repeats. Non-graded.

HHP 303 — Fitness Maintenance for the Physically Limited
Formerly listed as: HHP 303 — Rehabilitation for Physically Limited
Enrollment limited to: Open to all students who are capable of profiting from the instruction offered. To profit, students must be able to demonstrate basic safety skills; follow a workout program with minimal support from instructors and staff; participate in all aspects of the course, up to their level of ability; show progress toward course outcomes and objectives; demonstrate the ability to accept personal responsibility for their actions; and adhere to the Columbia College Student Code of Conduct. Students must complete an assessment prior to enrollment to ensure they are capable of profiting from the course. Students will only need to complete this assessment once and will not need to do so in future semesters.
54 Laboratory Hours = 54 Total Student Learning Hours
Provides direction for students with physical limitations to follow a prescribed program on improving cardiovascular, flexibility, and strength fitness levels. Unlimited repeats. Non-graded.

Claim Jumper guard Seth Coddington
HIST (HISTORY)

HIST 5/PHILO 5—Introduction to the History and Philosophy of Science, 3 units

Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 once for HIST 5 or PHILO 5. Not repeatable. Transfer: (CSU/UC) (CSU-GE: A3, C2) (IGETC: 1B, 3B)

HIST 11 — History of California, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Survey of California history from pre-Colombian period to the present. Emphasis will include the Native American, Spaniards, Mexicans, and Anglo-Americans. Considerable attention will be devoted to California's influential role in national and world events. Not repeatable. MJC equivalent: (HIST 129) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4F)

HIST 13 — World Civilizations: to 1500, 3 units
Formerly listed as HIST 13 — World Civilizations: to 1650
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Survey of the history of the world from the Neolithic period to the sixteenth 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4F) C-ID: (HIST 150)

HIST 14—World Civilizations: 1500 to Present, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours

Survey of world history from the beginning of the sixteenth 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4F) C-ID: (HIST 160)

HIST 16—United States: to 1877, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 CSU requirements in United States History, Constitution, and American Ideals.) Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4F) C-ID: (HIST 130)

HIST 17—United States: 1877 to Present, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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.) Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4F) C-ID: (HIST 140)
HLOC (HEALTH OCCUPATIONS)

HLOC 97—Work Experience in Health Occupations, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

HPMGT (HOSPITALITY MANAGEMENT)

HPMGT 97 — Work Experience in Hospitality Management, .5 to 4 units
0.5 Unit: 30 Unpaid Hours, 37.5 Paid Hours
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
75 hours paid employment equals 1 unit of credit.
60 hours unpaid employment equals 1 unit of credit.

This course provides students an opportunity to experience supervised employment in Hospitality Management. The student's employment must be related to educational or occupational goals. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

HPMGT 102 — Introduction to Hospitality Careers, 1.5 units
Formerly listed as: HPMGT 102 — Introduction to Hospitality Careers and Human Relations

27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning Hours

An introduction to the hospitality industry (comprising lodging, food and beverage services, and tourism) with a focus on its career opportunities in the hospitality industry. Individual goal-setting and career planning are emphasized. Not repeatable.

HPMGT 104 — Hospitality Laws and Regulations, 3 units

54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Field trips may be required. Not repeatable.
HPMGT 112 — Front Office Management/Hotel Catering, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
Introduction to the essential equipment, routines, and duties of the front desk clerk and their relationship to other hotel departments. Covers the planning and preparation for private parties, dinners, meetings, and other special events that a hotel or restaurant may cater. Field trips may be required. Not repeatable.

HPMGT 114—Introduction to Maintenance and Housekeeping, 1.5 units
27 Lecture Hours, 54 Out-of-Class Hours = 81 Total Student Learning 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. Not repeatable.

HPMGT 120 — Safety and Sanitation, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
Materials fee required
Sanitation and safety principles and practices for the food service professional. Prepares students to take the Serv-Safe Food Protection Manager certification exam from the National Restaurant Association. Field trips may be required. Not repeatable.

HPMGT 122 — Restaurant Math, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
This is an arithmetic course for food-service & hospitality 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, scales and devices for measuring weights and volumes. Not repeatable.

HPMGT 126—Nutrition for Chefs, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.

HPMGT 128—Kitchen Management, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.

HPMGT 130—Survey of Commercial Food Service Operations, 3 to 6 units
Corequisite(s): Concurrent enrollment in HPMGT 120
3 Units: 18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours
6 Units: 36 Lecture Hours, 216 Laboratory Hours, 72 Out-of-Class Hours = 324 Total Student Learning Hours
Materials fee required
A survey course which gives practical experience in operating a commercial food service operation. Production efficiency, marketing, food safety & sanitation guidelines, quality control, and production are emphasized. Field trips may be required. Not repeatable.

HPMGT 133A — Introduction to Commercial Food Preparation, 3 units
Corequisite(s): Concurrent enrollment in HPMGT 120
18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
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 food production. Food product identification, quality standards and cooking techniques will be covered along with cooking methods and flavor profiles. Adopting professional standards regarding uniforms, dependability, teamwork and quality performance will be emphasized. Field trips may be required. Not repeatable.

HPMGT 133B — Commercial Food Preparation, 4 units
Prerequisite(s): Completion of HPMGT 133A with at least a C or P
18 Lecture Hours, 162 Laboratory Hours, 36 Out-of-Class Hours = 216 Total Student Learning Hours
Materials fee required
Focus is on restaurant line cookery. Involves preparation of soups, salads, entrees, vegetables and starches. Menu cycle extends from family-style to buffets. Quality assurance, production efficiency and kitchen management are emphasized. Field trips may be required. Not repeatable.
COURSES: HPMGT

HPMGT 134—Commercial Baking: Beginning, 2.5 units
18 Lecture Hours, 81 Laboratory Hours, 36 Out-of-Class Hours =
135 Total Student Learning Hours
Materials fee required
This course covers tools, terms and functions in preparation of baked goods: yeast breads and pastries, cookies, cakes and specialty items to American Culinary Federation (ACF) competencies. Field trips may be required. Not repeatable.

HPMGT 135 — Commercial Baking: Advanced, 3 units
Prerequisite(s): Completion of HPMGT 134 with at least a C or P
18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours =
162 Total Student Learning Hours
Materials fee required
Advanced baking techniques including: cakes, icings, decorating skills, frozen desserts, tortes, and pastries. Volume production skills are also emphasized. Field trips may be required. Not repeatable.

HPMGT 136 — Dining Room Service and Management I, 2 units
9 Lecture Hours, 81 Laboratory Hours, 18 Out-of-Class Hours =
108 Total Student Learning Hours
Operation of the Cellar Bistro dining room and related service support stations is covered. The focus is on dining room operation and the duties of each position. Standards of service are practiced. Field trips may be required. Not repeatable.

HPMGT 137 — Chocolate, Sugar, and Confections, 3 units
Prerequisite(s): Completion of HPMGT 135 with at least a C or P
9 Lecture Hours, 135 Laboratory Hours, 18 Out-of-Class Hours =
162 Total Student Learning Hours
Materials fee required
This course will explore the history, chemistry and applications of chocolate and sugar. The use of these and other ingredients in the creation of confections will be applied. Field trips may be required. Not repeatable.
HPMGT 138 — Specialty Breads and Viennoiserie,
3 units
**Prerequisite(s):** Completion of HPMGT 135 with at least a C or P
9 Lecture Hours, 135 Laboratory Hours, 18 Out-of-Class Hours = 162 Total Student Learning Hours

**Materials fee required**
This course covers specialty bread and viennoiserie technique. Included will be pre-ferments, dough conditioners, special processing, enriched and rolled-in doughs. Field trips may be required. Not repeatable.

HPMGT 140 — Contemporary International Cuisine,
3.5 units
**Prerequisite(s):** Completion of HPMGT 133B with at least a C or P
2 Units: 18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning Hours
3.5 Units: 18 Lecture Hours, 135 Laboratory Hours, 36 Out-of-Class Hours = 189 Total Student Learning Hours

**Materials fee required**
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. Not repeatable.

HPMGT 141 — Restaurant Desserts, 2 units
**Prerequisite(s):** Completion of HPMGT 135 with at least a C or P
18 Lecture Hours, 54 Laboratory Hours, 36 Out-of-Class Hours = 108 Total Student Learning Hours

**Materials fee required**
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. Not repeatable.

HPMGT 142 — Garde Manger, 3 units
**Prerequisite/Corequisite:** Completion of or concurrent enrollment in HPMGT 120 with at least a C or P
27 Lecture Hours, 81 Laboratory Hours, 54 Out-of-Class Hours = 162 Total Student Learning Hours

**Materials fee required**
An introduction to the skills and processes used in the cold food kitchen. Use and maintenance of tools and equipment typical in the pantry and banquet departments. Focused on cold food preparation which includes knife skills, cold sauces, salads, sandwiches, appetizers, hors d'oeuvres, canapés, tray presentations, table setups, and condiments & pickles. Field trips may be required. Not repeatable.

HPMGT 143 — Advanced Garde Manger, 2 units
**Prerequisite(s):** Completion of HPMGT 142 with at least a C or P
9 Lecture Hours, 81 Laboratory Hours, 18 Out-of-Class Hours = 108 Total Student Learning Hours

**Materials fee required**
Advanced study of cold food preparation to include forcemeats, pates, curing, smoking, salami, sausages, and platter presentation with special attention to food shows and special events. Not repeatable.

HPMGT 146 — Dining Room Service and Management II, 2 to 3.5 units
**Prerequisite(s):** Completion of HPMGT 136 with at least a C or P
2 Units: 9 Lecture Hours, 81 Laboratory Hours, 18 Out-of-Class Hours = 108 Total Student Learning Hours
2.5 Units: 9 Lecture Hours, 108 Laboratory Hours, 18 Out-of-Class Hours = 135 Total Student Learning Hours
3 Units: 9 Lecture Hours, 135 Laboratory Hours, 18 Out-of-Class Hours = 162 Total Student Learning Hours
3.5 Units: 9 Lecture Hours, 162 Laboratory Hours, 18 Out-of-Class Hours = 189 Total Student Learning 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 may be required. Not repeatable.**

HPMGT 147 — Beverage Management, 2 units
27 Lecture Hours, 27 Laboratory Hours, 54 Out-of-Class Hours = 108 Total Student Learning Hours

**Materials fee required**
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, may have alternative lab assignments as they cannot taste. Field trips may be required. Not repeatable.

HPMGT 148 — Introduction to Wines, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours

**Materials fee required**
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. Not repeatable.
COURSES: HPMGT

HPMGT 190 — Hospitality Capstone, 1 unit
Formerly listed as: HPMGT 190 — Culinary Arts Internship
Enrollment limited to: Instructor Consent Required
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
Capstone course preparing students for employment in their chosen hospitality career path. Includes Resume development, industry current trends and a corequisite work experience in their area of concentration. Not repeatable.

HPMGT 200—Exploring Culinary and Baking Skills, 1.5 to 2.5 units
1.5 Units: 9 Lecture Hours, 54 Laboratory Hours, 18 Out-of-Class Hours = 81 Total Student Learning Hours
2 Units: 9 Lecture Hours, 81 Laboratory Hours, 18 Out-of-Class Hours = 108 Total Student Learning Hours
2.5 Units: 9 Lecture Hours, 108 Laboratory Hours, 18 Out-of-Class Hours = 135 Total Student Learning Hours
Materials fee required
This course is an exploratory course for those who are interested in learning proper usage of commercial 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. Field trips may be required. Not repeatable. Grading: (P/NP only)

HPMGT 201A—Basic Baking and Pastry Arts, 1 to 3 units
1 Unit: 9 Lecture Hours, 27 Laboratory Hours, 18 Out-of-Class Hours = 54 Total Student Learning Hours
1.5 Units: 9 Lecture Hours, 54 Laboratory Hours, 18 Out-of-Class Hours = 81 Total Student Learning Hours
2 Units: 9 Lecture Hours, 81 Laboratory Hours, 18 Out-of-Class Hours = 108 Total Student Learning Hours
2.5 Units: 9 Lecture Hours, 108 Laboratory Hours, 18 Out-of-Class Hours = 135 Total Student Learning Hours
3 Units: 18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to pastries, breads, cookies, pies and cakes. Students will explore the proper use of baking ovens, stoves, cooking equipment, and tools to produce baked products. Emphasis is on safety, sanitation, and basic competencies. Field trips may be required. Not repeatable.

HPMGT 201B—Basic Culinary Arts Skills, 1 to 3 units
Formerly listed as: HPMGT 201B — Intermediate Culinary and Pastry Arts
1 Unit: 9 Lecture Hours, 27 Laboratory Hours, 18 Out-of-Class Hours = 54 Total Student Learning Hours
1.5 Units: 9 Lecture Hours, 54 Laboratory Hours, 18 Out-of-Class Hours = 81 Total Student Learning Hours
2 Units: 9 Lecture Hours, 81 Laboratory Hours, 18 Out-of-Class Hours = 108 Total Student Learning Hours
2.5 Units: 9 Lecture Hours, 108 Laboratory Hours, 18 Out-of-Class Hours = 135 Total Student Learning Hours
3 Units: 18 Lecture Hours, 108 Laboratory Hours, 36 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to knife skills, product identification, culinary technique, and practical food safety. Students will explore the proper use of ovens, stoves, cooking equipment, and tools to produce food products. Emphasis is on safety, sanitation, and basic competencies. Field trips may be required. Not repeatable.
HUMAN (HUMANITIES)

HUMAN 1—Old World Culture, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 equivalent: (HUMAN 105) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

HUMAN 2—Modern Culture, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (HUMAN 106) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

HUMAN 3—World Culture, 3 units
Recommended for Success: ENGL 151 or equivalent
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (HUMAN 110) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

HUMAN 4—World Religions and Spirituality, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (PHILO 115) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

INDIS (INTERDISCIPLINARY STUDIES)

INDIS 48—Sustainable Living, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course introduces 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. Not repeatable. Transfer: (CSU) (CSU-GE: E)

INDIS 110—Peer Tutoring, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

INDIS 111—Group Peer Tutoring, .5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)
LIBR (LIBRARY SCIENCE)

LIBR 1—Introduction to Library and Information Resources, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
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. Not repeatable. Transfer: (CSU)

LIBR 101 Introduction to the Library, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Grading: (P/NP only)

MATH (MATHEMATICS)

MATH 2—Statistics, 4 units
Prerequisite(s): Completion of MATH 104 or with at least a C or P or placement through the assessment process
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning Hours
Statistics is the study of how to collect, organize, analyze, interpret, and communicate information from data. This course will cover descriptive statistics, normal distributions, correlation and regression, probability, sampling distributions, inference about quantitative and categorical variables, and inference about relationships. Not repeatable. MJC equivalent: (MATH 134) Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 110)

MATH 4—Mathematics for Elementary Teachers, 3 units
Prerequisite(s): Completion of MATH 104 with at least a C or P or placement through the assessment process
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Critical study of the real number system and its subsystems for prospective elementary school teachers. Includes the definitions of the basic arithmetic operations and their algorithms, numeration systems, number theory, problem solving, and mathematical communication and reasoning. Field trips may be required. Not repeatable. MJC equivalent: (MATH 105) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B4) C-ID: (MATH 120)

MATH 6—Mathematics for Liberal Arts Students, 3 units
Prerequisite(s): Completion of MATH 104 with at least a C or P or placement through the assessment process
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (MATH 101) Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A)
“Which math class should I start with?”

<table>
<thead>
<tr>
<th>If your major is…</th>
<th>Start with…</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEALTH &amp; SOCIAL SCIENCES</strong>&lt;br&gt;Allied Health*&lt;br&gt;Anthropology&lt;br&gt;Child Development*&lt;br&gt;Communication Studies&lt;br&gt;Early Childhood Education&lt;br&gt;Emergency Medical Services&lt;br&gt;Fire Science*&lt;br&gt;History&lt;br&gt;Kinesiology&lt;br&gt;Nutrition and Dietetics&lt;br&gt;Political Science&lt;br&gt;Psychology&lt;br&gt;Public Health&lt;br&gt;Social and Behavioral Sciences*&lt;br&gt;Sociology&lt;br&gt;Sport Science*</td>
<td>MATH 2—Statistics&lt;br&gt;or&lt;br&gt;MATH 2—Statistics&lt;br&gt;and MATH 122—Support for Statistics</td>
</tr>
<tr>
<td><strong>EDUCATION</strong>&lt;br&gt;Elementary Teacher Education&lt;br&gt;Liberal Studies*</td>
<td>MATH 4—Mathematics for Elementary Teachers</td>
</tr>
<tr>
<td><strong>LIBERAL &amp; FINE ARTS</strong>&lt;br&gt;Arts &amp; Humanities*&lt;br&gt;English&lt;br&gt;Fine Arts*&lt;br&gt;Media and Design*&lt;br&gt;Music&lt;br&gt;Studio Arts</td>
<td>MATH 6—Mathematics for Liberal Arts</td>
</tr>
<tr>
<td><strong>BUSINESS</strong>&lt;br&gt;Accounting*&lt;br&gt;Business Administration&lt;br&gt;Management*</td>
<td>Start where you left off in high school; additional math course(s) required depending on major or transfer school.&lt;br&gt;MATH 104—Algebra II&lt;br&gt;MATH 12—Finite Mathematics</td>
</tr>
<tr>
<td><strong>STEM (Science, Technology, Engineering and Mathematics Programs and Careers)</strong>&lt;br&gt;Biology&lt;br&gt;Chemistry&lt;br&gt;Engineering Fundamentals&lt;br&gt;Environmental Science&lt;br&gt;Forestry*&lt;br&gt;General Science*&lt;br&gt;Geographic Information Systems (GIS)<em>&lt;br&gt;Geology&lt;br&gt;Mathematics&lt;br&gt;Natural Resources</em>&lt;br&gt;Physics&lt;br&gt;Programming</td>
<td>Start where you left off in high school; additional math course(s) required depending on major or transfer school.&lt;br&gt;MATH 104—Algebra II&lt;br&gt;MATH 8—Trigonometry&lt;br&gt;MATH 16—Precalculus&lt;br&gt;MATH 18A—Calculus I</td>
</tr>
<tr>
<td><strong>CAREER &amp; TECHNICAL</strong>&lt;br&gt;Automotive Technology&lt;br&gt;Entrepreneurship&lt;br&gt;Fire Technology&lt;br&gt;Hospitality—Baking, Culinary, Management&lt;br&gt;Office Technology—Administrative or Medical&lt;br&gt;Water Resources Management</td>
<td>Any math course listed above (see a counselor to determine the most appropriate course)&lt;br&gt;or&lt;br&gt;MATH 104—Algebra II&lt;br&gt;or&lt;br&gt;MATH 106—Introduction to Mathematical Thinking</td>
</tr>
</tbody>
</table>

**MATH 2—Statistics**<br>“I am comfortable with the algebra I learned in high school and feel prepared to enter Statistics.”

**MATH 2—Statistics**<br>and<br>**MATH 122—Support for Statistics**<br>“I struggle in math. In MATH 122, I will have extra support and time with my instructor and that will help me do better in my Statistics class.”

Still deciding on your major?<br><br>CALL (209) 588-5109 to make an appointment with a counselor.

**Important!**<br>Before registering for any math class, you must make an appointment to meet with a counselor for math placement: (209) 588-5109.

* A transferrable math course is recommended for this major, but MATH 104 or MATH 106 may be used to satisfy AA/AS graduation requirements.
COURSES: MATH

MATH 8—Trigonometry, 3 units
Prerequisite(s): Completion of MATH 104 or with at least a C or P, or placement through the assessment process
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.
MJC equivalent: (MATH 161) Transfer: (CSU) (CSU-GE: B4) C-ID: (MATH 851)

MATH 12—Finite Mathematics, 3 units
Prerequisite(s): Completion of MATH 104 with at least a C or P, or placement through the assessment process
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Introduction to mathematical modeling, linear systems of equations and inequalities (linear programming), sets, combinatorics, probability, statistics, and the mathematics of finance. Not repeatable.
MJC equivalent: (MATH 130) Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 130)

MATH 16—Precalculus, 5 units
Prerequisite(s): Completion of MATH 8 with at least a C or P
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
Topics in Algebra, Trigonometry and Analytic Geometry are studied in preparation for Calculus. Includes polynomial, absolute value, radical, rational, exponential, logarithmic, and trigonometric equations, functions and their graphs. Not repeatable. Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 155)

MATH 18A—Calculus I, 5 units
Prerequisite(s): Completion of MATH 17B or MATH 16 with at least a C or P
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning 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. Not repeatable. MJC equivalent: (MATH 171) Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 210) (MATH 18A + MATH 18B = C-ID MATH 900S)

MATH 18B—Calculus II, 5 units
Prerequisite(s): Completion of MATH 18A with at least a C or P or placement through the assessment process
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
Anti-derivatives, techniques of integration, applications of definite integrals to geometry, physics, probability, and economics, numerical integration, improper integrals, simple differential equations, convergence of series, power series, Taylor series, Fourier series, areas defined by polar and parametric curves. Not repeatable.
MJC equivalent: (MATH 172) Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 220) (MATH 18A + MATH 18B = C-ID MATH 900S)

MATH 18C—Calculus III, 5 units
Prerequisite(s): Completion of MATH 18B with at least a C or P
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
Vectors and solid analytic geometry, vector valued functions, partial differentiation, multiple integrals, vector fields and vector calculus. Not repeatable.
MJC equivalent: (MATH 173) Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 230)

MATH 26—Linear Algebra, 3 units
Prerequisite(s): Completion of MATH 18A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course develops the techniques and theory needed to solve and classify systems of linear equations. Solution techniques include row operations, Gaussian elimination and matrix algebra. Investigation of properties of vectors in two and three dimensions leads to the notion of an abstract vector space. Vector space and matrix theory topics include inner products, norms, orthogonality, eigenvalues, eigenvectors, eigenspaces and linear transformations. The course also includes an introduction to writing proofs and selected applications and numerical methods. Not repeatable.
Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 250)

MATH 28—Differential Equations, 3 units
Prerequisite(s): Completion of MATH 18B with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Develops techniques for analysis of ordinary differential equations: exact, separable, and linear; constant coefficients, undetermined coefficients, variations of parameters. Also discussed will be: series solutions, systems, and Laplace transforms. Not repeatable.
Transfer: (CSU/UC) (CSU-GE: B4) (IGETC: 2A) C-ID: (MATH 240)
MATH 101 — Algebra I, 5 units
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning 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. Not repeatable. MJC equivalent: (MATH 29)

MATH 104 — Algebra II, 5 units
Prerequisite(s): Completion of MATH 101 with at least a C or P
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning 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. Not repeatable. MJC equivalent: (MATH 90)

MATH 106 — Introduction to Mathematical Thinking, 4 units
Prerequisite(s): Completion of MATH 101 with at least a C or P
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. Satisfies MJC mathematics competency.

MATH 120 — Path to Statistics, 5 units
Recommended for Success: Concurrent enrollment in either MATH 750 or MATH 650, eligibility for MATH 101, and ENGL 151 or eligibility for ENGL 1A
90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours
This accelerated algebra course prepares non-STEM major students for transfer-level Statistics, Math 2. It covers core concepts from elementary algebra, intermediate algebra, and introduces descriptive statistics. Topics include ratios, rates, and proportional reasoning; arithmetic reasoning using fractions, decimals and percents; evaluating expressions, solving equations, and analyzing algebraic forms to understand statistical measures. The emphasis of this course will be interpreting algebraic solutions in the context of situations. This course does not meet graduation requirements and is not a substitute for any other Math course. If a student does not go on to successfully complete Math 2, then Math 104 would still be required to earn an Associates Degree. This course is designed for students who do not want to major in STEM fields or any other major requiring Math 104 as a pre-requisite for coursework. Not repeatable.

MATH 122 — Math Support for Statistics, 2 units
Corequisite(s): Concurrent enrollment in MATH 2
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning Hours
A review of the core prerequisite skills, competencies, and concepts needed in statistics. Intended for students who are concurrently enrolled in MATH 2, Statistics, at Columbia College. Topics include concepts from arithmetic, pre-algebra, elementary and intermediate algebra, and descriptive statistics that are needed to understand the basics of college-level statistics. Concepts are taught through the context of descriptive data analysis. Additional emphasis is placed on solving and graphing linear equations and modeling with linear functions. Not repeatable. Grading: (P/NP only)

MATH 602 — Prealgebra, 4 units
72 Lecture Hours, 144 Out-of-Class Hours = 216 Total Student Learning 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. Not repeatable. MJC equivalent: (MATH 19 or 20)
MATH 650—Personalized Mathematics Development, .5 to 2 units
0.5 Unit: 27 Laboratory Hours = 27 Total Student Learning Hours
1 Unit: 54 Laboratory Hours = 54 Total Student Learning Hours
1.5 Units: 81 Laboratory Hours = 81 Total Student Learning Hours
2 Units: 108 Laboratory Hours = 108 Total Student Learning 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. Successful completion of this course does not satisfy prerequisite or degree requirements. Not repeatable. Grading: (P/NP only)

The following courses are noncredit and are not applicable for graduation and/or transfer.

MATH (Noncredit courses in Math)

MATH 750 — Personalized Mathematics Development
108 Laboratory Hours = 108 Total Student Learning Hours
This noncredit course, equivalent to the credit course Math 650, 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. Successful completion of this course does not satisfy prerequisite or degree requirements. Unlimited repeats. Non-graded.

MEDIA

(MEDIA)

MEDIA 1—Introduction to Digital Multimedia, 3 units
Formerly listed as: CCTDM 5 — Introduction to Digital Multimedia
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

MEDIA 3—Writing for Multimedia, 3 units
Formerly listed as: CCTDM 6 — Writing for Multimedia
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

MEDIA 10/ART 53—Computer Graphics, 3 units
Formerly listed as: CCTDM 53 — Computer Graphics I
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
This course introduces the student to the fundamentals of computer graphics. Topics include the elements and principles of design, concept development, characteristics of vector and raster digital files, color modes, digital drawing and painting, and formatting for print and the Web. Students will acquire basic skills in current digital illustration software and create original design pieces. Credit may be earned for only one of the following: MEDIA 10 or ART 53. Not repeatable. Transfer: (CSU/UC) C-ID: (ARTS 250)

MEDIA 12—Photo Editing for Digital and Print Publication, 3 units
Formerly listed as: CCTDM 50 — Photo Editing for Digital and Print Publication
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
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. Not repeatable. Transfer: (CSU)
COURSES: MEDIA

CCTDM to MEDIA
Effective as of the 2020-2021 academic year, the Columbia College department of Computer and Communications Technology: Digital Media (CCTDM) has renamed the department to Media (MEDIA) and renumbered course IDs. The following crosswalk shows how CCTDM Course IDs map to MEDIA course IDs.

<table>
<thead>
<tr>
<th>CCTDM Course ID</th>
<th>MEDIA Course ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>45</td>
<td>22</td>
</tr>
<tr>
<td>50</td>
<td>12</td>
</tr>
<tr>
<td>51</td>
<td>14</td>
</tr>
<tr>
<td>53</td>
<td>10</td>
</tr>
<tr>
<td>56</td>
<td>16</td>
</tr>
</tbody>
</table>

MEDIA 14/ART 51 — Publication Design, 3 units
Formerly listed as: CCTDM 51 — Publication Design I
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
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: MEDIA 14 or ART 51. Not repeatable. Transfer: (CSU)

MEDIA 16/ART 56—Typography, 3 units
Formerly listed as: CCTDM 56 — Typography
Prerequisite(s): Completion of MEDIA 10 or ART 53 with at least a C or P
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
This course is an introduction to typography for visual communication in graphic design and emphasizes the use of typography in the design process. It includes aspects of analytical and creative problem solving in print collateral and web design. The course considers typographic design for current and emerging technologies. Additionally, students explore the evolution and classification of letterforms from ancient to contemporary, and feature the investigation of structure, format, legibility and creative expression. Not repeatable. Transfer: (CSU/UC)

MEDIA 20—Computer Graphics and Animation, 3 units
Formerly listed as: CCTDM 40 — Computer Graphics and Animation
Recommended for Success: MEDIA 10
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC)

MEDIA 22—Digital 3D Modeling and Animation, 3 units
Formerly listed as: CCTDM 45 — Digital 3D Modeling and Animation
Recommended for Success: MEDIA 20
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
This course introduces digital 3D modeling and animation. Students will explore 3D modeling software, digital modeling techniques, and animation. This course is intended to train students who are pursuing 3D computer-driven animation in preparation for additional study in digital animation, game design and digital media. The course uses industry standard, state-of-the-art, high-end computer-driven animation software which is upgraded as industry changes. Not repeatable. Transfer: (CSU)
MEDIA 24—Compositing for Motion Graphics, 3 units
Formerly listed as: CCTDM 41 — Compositing for Motion Graphics
Recommended for Success: MEDIA 26, or MEDIA 10/ART 53, or MEDIA 12, MEDIA 20
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
This Course introduces software and techniques designed to provide a comprehensive set of 2D and 3D tools for compositing, animation, and effects for motion-graphics, visual effects, web design, film and video. Not repeatable. Transfer: (CSU/UC)

MEDIA 26—Video Production, 3 units
Formerly listed as: CCTDM 28 — Video Production I + CCTDM 29 — Video Production II
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
This course introduces students to video production, aesthetics, and terminology. Students will learn the essentials of creating basic computer video: project pre-planning, including scripting; production practices, including editing; and, postproduction. Students will attain skills in editing footage and audio, using digital editing software. In this project-based course, students will work individually, and in groups, on approved projects and participate in class critiques. Not repeatable. Transfer: (CSU)

MEDIA 30—Introduction to HTML and CSS, 3 units
Formerly listed as: CCTDM 10 — Introduction to HTML and CSS
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Use HTML and CSS software authoring tools 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. Not repeatable. Transfer: (CSU)

MGMT (MANAGEMENT)

MGMT 110—Communication in the Workplace, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 111—Customer Service, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 112—Team Building, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 113—Attitude in the Workplace, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 114—Values and Ethics in the Workplace, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Grading: (P/NP only)
MGMT 115—Time Management, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 116—Stress Management in the Workplace, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 117—Conflict Management, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
Designed to provide the student with an analysis of attitudes and behavior which create conflict between individuals and groups within an organization. Not repeatable. Grading: (P/NP only)

MGMT 118—Decision Making in the Workplace, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
Designed to introduce the student to decision making and problem solving as a supervisor or employee. Not repeatable. Grading: (P/NP only)

MGMT 119—Managing Organizational Change, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MGMT 120—Generational Diversity: Managing Cross-Generational Teams, 5 units
9 Lecture Hours, 18 Out-of-Class Hours = 27 Total Student Learning Hours
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. Not repeatable. Grading: (P/NP only)

MUSIC 2—Introduction to Music, 3 units
Recommended for Success: ENGL 151
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (MUSG 101) Transfer: (UC/CSU) (CSU-GE: C1) (IGETC: 3A) C-ID: (MUS 100)

MUSIC 4A—Elementary Musicianship, 1 unit
Prerequisite(s): Completion of MUSIC 4A with at least a C or P
Recommended for Success: Concurrent enrollment in Music 20A
54 Laboratory Hours = 54 Total Student Learning Hours
Basic course for developing musical skills. Teaches sight singing, ear training, melodic dictation, and basic keyboard skills. Not repeatable. MJC equivalent: (MUST 131) Transfer: (CSU/UC) C-ID: (MUS 125)

MUSIC 4B—Elementary Musicianship, 1 unit
Prerequisite(s): Completion of MUSIC 4A with at least a C or P
Recommended for Success: Concurrent enrollment in MUSIC 20B
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJC equivalent: (MUST 132) Transfer: (CSU/UC) C-ID: (MUSIC 135)

MUSIC 5A—Intermediate Musicianship, 1 unit
Prerequisite(s): Completion of MUSIC 4B with at least a C or P
54 Laboratory Hours = 54 Total Student Learning Hours
Continuation of MUSIC 4B and applies and develops the rhythmic, melodic, and harmonic materials through ear training, sight singing, analysis, and dictation. Not repeatable. MJC equivalent: (MUST 133) Transfer: (CSU/UC) C-ID: (MUS 145)

MUSIC 5B—Intermediate Musicianship, 1 unit
Recommended for Success: MUSIC 21A and MUSIC 5A
54 Laboratory Hours = 54 Total Student Learning Hours
Continuation of Music 5A, including sight singing, melodic and rhythmic dictation, and aural analysis of harmonic materials and basic keyboard skills. Not repeatable. MJC equivalent: (MUST 134) Transfer: (CSU/UC) C-ID: (MUS 155)
MUSIC 10—Survey of Music History and Literature: Ancient to 1750, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A)

MUSIC 11—Survey of Music History and Literature: 1750 to Present, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A)

MUSIC 12—American Popular Music: Blues and Jazz to Rock ‘n’ Roll, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
An introduction to jazz style, jazz history, and popular music of the 20th and 21st centuries. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C1) (IGETC: 3A)

MUSIC 20A—Elementary Music Theory, 3 units
Recommended for Success: Concurrent enrollment in MUSIC 4A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.) C-ID: (MUS 120)
MUSIC 20B—Elementary Music Theory, 3 units
**Prerequisite(s):** Completion of MUSIC 20A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Continuing study in harmony and analysis. Included are secondary dominants, modulation, altered chords, nonharmonic notes, and extended chords. Not repeatable. **Transfer:** (CSU/UC) C-ID: (MUS 130)

MUSIC 21A—Intermediate Music Theory, 3 units
**Prerequisite(s):** Completion of MUSIC 20B with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. **Transfer:** (CSU/UC -Transfer credit limited. See a counselor.) C-ID: (MUS 150)

MUSIC 21B — Intermediate Music Theory II, 3 units
**Formerly listed as:** MUSIC 21B — Intermediate Music Theory
**Prerequisite(s):** Completion of MUSIC 21A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. **Transfer:** (CSU/UC -Transfer credit limited. See a counselor.) C-ID: (MUS 150)

MUSIC 31A — Elementary Piano I, 1 unit
**Formerly listed as:** MUSIC 31A — Elementary Piano
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJ C equivalent: (MUSA 121) **Transfer:** (CSU/UC)

MUSIC 31B — Elementary Piano II, 1 unit
**Formerly listed as:** MUSIC 31B — Elementary Piano
**Prerequisite(s):** Completion of MUSIC 31A with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. **Transfer:** (CSU/UC)

MUSIC 36—Elementary Voice, 1 unit
54 Laboratory Hours = Total 54 Total Student Learning 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. Not repeatable. **MJC equivalent:** (MUSA 151) **Transfer:** (CSU/UC)

MUSIC 37—Advanced Elementary Voice, 1 unit
**Prerequisite(s):** Completion of MUSIC 36 with at least a C or P
54 Laboratory Hours = Total 54 Total Student Learning 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. Not repeatable. **MJC equivalent:** (MUSA 152) **Transfer:** (CSU/UC)

MUSIC 38—Intermediate Voice, 1 unit
**Prerequisite(s):** Completion of MUSIC 37 with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. **Transfer:** (CSU/UC)

MUSIC 39—Advanced Intermediate Voice, 1 unit
**Prerequisite(s):** Completion of MUSIC 38 with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. **MJC equivalent:** (MUSA 153) **Transfer:** (CSU/UC)

MUSIC 41A — Intermediate Piano I, 1 unit
**Formerly listed as:** MUSIC 41A — Intermediate Piano
**Prerequisite(s):** Completion of MUSIC 31B with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. **MJC equivalent:** (MUSIC 41A & 41B = MJC MUSA 123) **Transfer:** (CSU/UC)
MUSIC 41B — Intermediate Piano II, 1 unit
Formerly listed as: MUSIC 41B — Intermediate Piano
Prerequisite(s): Completion of MUSIC 41A with at least a C or P
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJC equivalent: (MUS 160) Transfer: (CSU/UC)

MUSIC 49—Beginning Guitar, 1 unit
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. MJC equivalent: (MUSA 141) Transfer: (CSU/UC)

Limitations apply to MUSIC 50 - MUSIC 78.
Each course is limited to a maximum of four (4) enrollments.

MUSIC 50—Private Lessons-Guitar, 5 units
Enrollment limited to students who successfully pass audition during the first week of class
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. MJC equivalent: (MUSA 145) Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 51—Private Lessons-Keyboard, 5 units
Enrollment limited to students who successfully pass audition during the first week of class
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. MJC equivalent: (MUSA 124) Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 52—Private Lessons-Woodwinds, .5 units
Enrollment limited to students who successfully pass audition during the first week of class
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. MJC equivalent: (MUSA 183) Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 53—Private Lessons-Brass, .5 units
Enrollment limited to students who successfully pass audition during the first week of class
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. MJC equivalent: (MUSA 173) Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 54—Private Lessons-Strings, .5 units
Enrollment limited to students who successfully pass audition during the first week of class
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. MJC equivalent: (MUSA 163) Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 55—Private Lessons—Percussion, .5 units
Enrollment limited to students who successfully pass audition during the first week of class
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 56—Private Lessons—Voice, .5 units
Enrollment limited to students who successfully interview with instructor
27 Laboratory Hours = 27 Total Student Learning Hours
Study of performance techniques, interpretation and repertoire in private instruction. Designed primarily for music majors and minors. Outside performance required. 4 completions allowed. MJC equivalent: (MUSA 154) Transfer: (CSU/UC) C-ID: (MUS 160)

MUSIC 60—College Choir, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class
54 Laboratory Hours = 54 Total Student Learning 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. 4 completions allowed. MJC equivalent: (MUSE 155) Transfer: (CSU/UC) C-ID: (MUS 180)
MUSIC 64—Jazz Choir, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of vocal jazz and improvisation in an ensemble of limited size. 4 completions allowed. Transfer: (CSU/UC) C-ID: (MUS 180)

MUSIC 66—Columbia College Community Chorus, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of mixed choral works of various styles and periods. Includes development of vocal technique and musicianship. 4 completions allowed. Transfer: (CSU/UC) C-ID: (MUS 180)

MUSIC 72—Jazz Ensemble, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of instrumental jazz and improvisation; techniques of improvisation will be explored. 4 completions allowed. MJC equivalent: (MUSE 181) Transfer: (CSU/UC) C-ID: (MUS 180)

MUSIC 75 — Jazz Studies, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class
54 Laboratory Hours = 54 Total Student Learning 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. Unlimited repeats. Non-graded.

MUSIC 76 — Community Orchestra, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class.
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of orchestral literature of various styles and media for older adults. Audition required for wind, brass, and percussion players as needed. Field trips may be required. 4 completions allowed. Transfer: (CSU/UC) C-ID: (MUS 180)

MUSIC 78—Ensemble: Instrumental Emphasis, 1 unit
Enrollment limited to students who successfully pass audition during the first week of class
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of music for instrumental ensembles including wind ensemble and small orchestra literature. 4 completions allowed. MJC equivalent: (MUSE 176) Transfer: (CSU/UC) C-ID: (MUS 180)

The following courses are noncredit and are not applicable for graduation and/or transfer.

MUSIC (Noncredit courses in Music)

MUSIC 302 — Choral Singing
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of mixed choral works of various styles and periods for older adults. Includes development of vocal technique and musicianship. Field trips required. Unlimited repeats. Non-graded

MUSIC 303—Orchestra
54 Laboratory Hours = 54 Total Student Learning Hours
Study and performance of orchestral literature of various styles and media for older adults. Audition required for wind, brass, and percussion players as needed. Field trips may be required. Unlimited repeats. Non-graded.

MUSIC 305 — Jazz Studies
108 Laboratory Hours = 108 Total Student Learning Hours
Study and performance of instrumental and vocal jazz in both solo and ensemble for older adults. This could include big band, choir, combos, and solos 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. Unlimited repeats. Non-graded.

MUSIC 308—Solo Singing
54 Laboratory Hours = 54 Total Student Learning Hours
Instruction in solo singing including breath support, resonance, interpretation, phrasing, and performance for older adults. Class is taught in a group setting but with time given for individualized instruction. Unlimited repeats. Non-graded.

Columbia College does not offer a Nursing program. However, within the Yosemite Community College District, Modesto Junior College offers an Associate Degree for Nursing satellite program that operates on the Columbia College campus. See a Columbia College counselor or call (209) 588-5109 for more information.
OFTEC (OFFICE TECHNOLOGY)

OFTEC 50—Medical Terminology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. **Transfer:** (CSU) **C-ID:** HIT 103X

OFTEC 97 — Work Experience in Office Technology, 1 to 4 units
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) **Transfer:** (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

OFTEC 100—Computer Keyboarding I, 1 unit
54 Laboratory Hours = 54 Total Student Learning Hours
Designed for students wishing to master the touch method of keyboarding. Not repeatable. **C-ID:** (BSOT 110X)

OFTEC 125—Records Management and Filing Applications, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable.

OFTEC 130—Business English, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (OFADM 304)

OFTEC 131—Office Procedures and Technology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 an employment portfolio. Not repeatable. MJC equivalent: (OFADM 314)

OFTEC 132 — Business Communications, 3 units
**Prerequisite(s):** Completion of ENGL 650 or OFTEC 130 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. **C-ID:** (BSOT 126X)

OFTEC 140—Beginning Word Processing, 2 units
**Recommended for Success:** OFTEC 100
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable. **C-ID:** (BSOT 111X)

OFTEC 141 — Intermediate Word Processing, 3 units
**Recommended for Success:** OFTEC 140
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Students master skills in intermediate word processing features which will be applied to creating business documents. Areas of emphasis will include text columns, macros, styles, merge, multipage documents, sort and select, and graphics. Not repeatable. **C-ID:** (BSOT 121X and BSOT 131X)

OFTEC 143—Microsoft Outlook, 1 unit
18 Lecture Hours, 36 Out-of-Class Hours = 54 Total Student Learning Hours
An overview course which familiarizes students with the basic concepts surrounding the operation of an e-mail system. It provides tools to send, receive, and manage e-mail; organize schedules and events; keep track of contacts; and maintain to-do lists and other collections of notes. Not repeatable. **C-ID:** (BSOT 106X)
OFTEC 149—Electronic Health Records, 2 units
36 Lecture Hours, 72 Out-of-Class Hours = 108 Total Student Learning 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. Not repeatable.

OFTEC 150—Medical Law and Ethics, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
An introduction to law and ethics in the medical office. The course covers 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. Not repeatable.

OFTEC 151—Medical Office Management, 3 units
Recommended for Success: OFTEC 50
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. A model practice management program is included. Not repeatable.

OFTEC 152A — Reimbursement Methodology, 3 units
Formerly listed as: OFTEC 152A — Medical Billing and Coding
Recommended for Success: OFTEC 50
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
A fundamental course which explores the prospective payment systems that are used by the U. S. Government, as well as other key healthcare organizations. Each system will be analyzed, as it ultimately can compromise a patient’s source of payment for healthcare services. The course gives an introductory look at the history of healthcare reimbursement and the types of methodologies it encapsulates. It also includes preparation for employment in the reimbursement system setting, as well as a position as a professional coder. Not repeatable.

OFTEC 152B — Basic ICD Coding, 3 units
Formerly listed as: OFTEC 152B — Medical Coding II
Recommended for Success: OFTEC 50
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Application of ICD (diagnosis) coding skills in the various medical specialties. Students are guided through the entire coding process for each anatomical system. Examples teach the coding process and students learn how to identify and abstract pertinent information from medical documentation. Not repeatable.

OFTEC 152C — Basic CPT Coding, 3 units
Formerly listed as: OFTEC 152C — Advanced Medical Coding
Recommended for Success: OFTEC 50
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
CPT Medical Coding provides an in-depth understanding of physician-based medical 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. Not repeatable.

OFTEC 152D — Intermediate Coding, 3 units
Prerequisite(s): Completion of OFTEC 152B and OFTEC 152C with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Applying the official coding guidelines to complex medical record documentation. Students will assign both diagnosis codes and procedure odes to case studies focusing on correct code assignment, sequencing, and ensuring the UHDDS (Uniform Hospital Discharge Data Set) guidelines and official guidelines are followed. Not repeatable.

OFTEC 152E — Professional Coding, 3 units
Prerequisite(s): Completion of OFTEC 152D with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Additional experience in applying the coding knowledge and skills acquired in 152B, C, and D to help prepare for the coding portion of the CCA (Certified Coding Associate) examination. It is designed to simulate real-life scenarios. Not repeatable.
OFTEC 168—Creating a Virtual Office, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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, communication, organization, and operations. In this setting, a virtual entrepreneur is a highly skilled professional working independently in support of other businesses and providing a multitude of services, often using the latest technology. Not repeatable.

OFTEC 170 — Healthcare Delivery Systems, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Healthcare Delivery Systems provides perspectives on health care delivery, past, present, and future. It also addresses the impact of health care issues on health care delivery, including the determinants of health to include insurance costs, applications for health professions, and the need for comprehensive planning and its impact on the future. This course will encourage the formulation and evaluation of potential solutions to some of the most urgent health care delivery issues facing the U.S. today. Not repeatable.

OFTEC 171 — Healthcare Data Content and Structure, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
The course familiarizes students with the basic concepts surrounding health records and introduces them to the evolving profession of Health Information Management. The uses and formats of health information are explored, and examples are provided to illustrate the use of the health record as the basis for clinical code selection and reporting. Not repeatable.

OFTEC 172 — Computer Basics in Healthcare, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Current information on the impact of the use of various forms of electronic communication using computers, smartphones, tablets, etc., in healthcare is the focus of this course. Areas covered are the impact of the electronic health record (EHR), telemedicine, security and privacy, and the use of computers in areas such as interventional radiology and nanotechnology in surgery. Meaningful use criteria in the EHR, the role of healthcare reform in promoting health IT and new practice management software are discussed. Not repeatable.

OFTEC 210—Typing Speed and Accuracy Building, 1 unit
Recommended for Success: OFTEC 100
54 Laboratory Hours = 54 Total Student Learning Hours
Speed building and accuracy with intensive drills, timed writings and remedial work. Not repeatable.

PHILO (PHILOSOPHY)

PHILO 1—Introduction to Philosophy, 3 units
Recommended for Success: Eligibility for ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (PHILO 101) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B) C-ID: (PHIL 100)

PHILO 5/HIST 5—Introduction to the History and Philosophy of Science, 3 units
Prerequisite(s): Completion of ENGL 1A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 once for PHILO 5 or HIST 5. Not repeatable. Transfer: (CSU/UC) (CSU-GE: A3, C2) (IGETC: 1B, 3B)

PHILO 25—Twentieth Century Philosophy, 3 units
Recommended for Success: ENGL 1A
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (PHILO 123) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)

PHILO 35—Environmental Ethics, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (PHILO 135) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B)
PHOTOGRAPHY
See ART

PHYCS (PHYSICS)

PHYCS 1 — Conceptual Physics, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
A conceptual investigation of the physics of motion, energy, light and color, gravitation and relativity. Not repeatable. MJC equivalent: (PHYS 160) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1) (IGETC: 5A)

PHYCS 4A — Introductory Physics I: Trigonometry Level, 4 units
Prerequisite(s): Completion of MATH 8 with at least a C or P
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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 and critical thinking. Field trips may be required. Not repeatable. MJC equivalent: (PHYS 143) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (PHYS 105)

PHYCS 4B — Introductory Physics II: Trigonometry Level, 4 units
Prerequisite(s): Completion of PHYCS 4A with at least a C or P
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning 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 and critical thinking. Field trips may be required. Not repeatable. MJC equivalent: (PHYS 143) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (PHYS 105)

PHYCS 5A — Physics I: Calculus Level, 4 units
Formerly listed as: PHYCS 5A — Introductory Physics I: Calculus Level
Prerequisite(s): Completion of MATH 18A with at least a C or P
Recommended for Success: PHYCS 1
54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours = 216 Total Student Learning Hours
PHYCS 5A is a calculus based course intended for students majoring in physical sciences and engineering, as a part of three-semester course. A course in Classical Mechanics with comprehensive study in the major topics of: kinematics in one and two dimensions, Newton's force laws, work and energy, momentum, statics, linear and rotational dynamics, gravitation, fluids, oscillations & simple harmonic motion, waves and sound. Not repeatable. Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (PHYS 205)
COURSES: PHYCS

PHYCS 5B—Physics II: Calculus Level, 4 units

Formerly listed as: PHYCS 5B — Introductory Physics II: Calculus Level

Prerequisite(s): Completion of PHYCS 5A and MATH 18B with at least a C or P

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours
= 216 Total Student Learning Hours

PHYCS 5B is a continuation of calculus based physics, modeling physical phenomena of electricity and magnetism. Comprehensive study of major topics of: electrostatics, electric forces and fields, electric fields of a point charge and continuous charge distribution, Gauss' law, electric potential (dipole, ring, and capacitor); capacitance and fundamentals of DC/AC circuits, magnetic forces and fields and electromagnetic induction, Biot-Savart law and Ampere's law, Maxwell's Equations. Since different colleges vary slightly in the order in which the topics are presented, it is strongly recommended that students take the entire sequence at Columbia College. Not repeatable. MJC equivalent: (PHYS 103) Transfer: (CSU/UC-Transfer credit limited. See a counselor.) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (PHYS 210)

PHYCS 5C — Physics III: Calculus Level, 4 units

Prerequisite(s): Completion of PHYCS 5B and MATH 18B with at least a C or P

Recommended for Success: Concurrent enrollment in MATH 18C

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours
= 216 Total Student Learning Hours

PHYCS 5C is a continuation of calculus based physics course PHYCS 5B. Comprehensive study in the core topics of thermodynamics (including work, heat, 1st and 2nd law of thermodynamics, gases, kinetic theory, heat engines, entropy), optics (including interference, diffraction, geometrical ray optics, and Snell's law), relativity and introduction to modern physics (including Heisenberg's Uncertainty Principle and Schrodinger's Equation, atomic & nuclear physics). PHYCS 5C intended for students majoring in physical sciences and engineering. Since different colleges vary slightly in the order in which the topics are presented, it is strongly recommended that students take the entire sequence at Columbia College. Not repeatable. MJC equivalent: (PHYS 101 + 102 + 103 = CC PHYCS 5A + 5B + 5C) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (PHYS 215) (PHYCS 5A + 5B + 5C = C-ID PHYS 200S)

PHYCS 30/CHEM 30 — Survey of Chemistry and Physics, 4 units

Prerequisite(s): Completion of MATH 101 with at least a C or P

54 Lecture Hours, 54 Laboratory Hours, 108 Out-of-Class Hours
= 216 Total Student Learning Hours

An investigation of basic principles of physics and chemistry including matter, physical and chemical properties, energy, motion, light, atomic structure, bonding, solutions and chemical reactions. The inter-dependence of chemistry and physics will be emphasized. The inquiry-based learning experience is designed to assist students and future science educators in learning how to guide learning by self-discovery. Not repeatable. MJC equivalent: (PHSCI 180) Transfer: (CSU/UC) (CSU-GE: B1, B3) (IGETC: 5A, 5C) C-ID: (CHEM 30 or PHYCS 30 = C-ID CHEM 140)
POLSC (POLITICAL SCIENCE)

POLSC 10 — Constitutional Government, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. (POLSC 10, taken in conjunction with HIST 16 or HIST 17 satisfies CSU requirements in United States History, Constitution, and American ideals.) Not repeatable. MJC equivalent: (POLSC 101) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4H) C-ID: (POLS 110)

POLSC 12 — American Political Thought, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4H)

POLSC 14 — International Relations, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent (POLSC 110) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4H) C-ID: (POLS 140)

POLSC 16 — Comparative Government and Politics, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Comparative analysis of different kinds of political systems, including their history, political institutions, processes and policies, the environments in which they occur, and their consequences. Not repeatable. MJC equivalent: (POLSC 140) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4H) C-ID: (POLS 130)

PSYCH (PSYCHOLOGY)

PSYCH 1—General Psychology, 3 units
Recommended for Success: ENGL 151
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (PSYCH 101) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4I) C-ID: (PSY 110)

PSYCH 5—Human Sexual Behavior, 3 units
Recommended for Success: ENGL 151
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
Exploration of issues in human sexuality from a psychological, social and biological perspective. Study and discussion of sexual behavior, feelings and attitudes as they affect one’s self and others. Not repeatable. MJC equivalent: (PSYCH 110) Transfer: (CSU/UC) (CSU-GE: E) (IGETC: 4I) C-ID: (PSY 130)

PSYCH 10—Lifespan Human Development, 3 units
Recommended for Success: PSYCH 1
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (PSYCH 141) Transfer: (CSU/UC) (CSU-GE: E) (IGETC: 4I) C-ID: (PSY 180)

PROGRAMMING

See COMP
COURSES: PSYCH

PSYCH 15—Research Methods in Psychology, 3 units
Prerequisite(s): Completion of PSYCH 1 and MATH 2 with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) C-ID: (PSY 200)

PSYCH 20—Sport Psychology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU) (CSU-GE: D, E)

PSYCH 24—Abnormal Psychology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course is designed to introduce students to the scientific study of psychopathology and atypical psychological behavior. The course will examine psychological disorders from a variety of contemporary psychological perspectives, including the biological and neuroscience perspectives, the psychological perspectives and the sociocultural perspectives. Students will also be introduced to current assessment and diagnostic criteria and the DSM-5, as well as intervention and treatment strategies. An examination of the scientific method and current research are also presented. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D, E) (IGETC: 4I) C-ID: (PSY 105) MJC equivalent: (PSYCH 105)

PSYCH 30—Psychology of Adjustment, 3 units
Recommended for Success: ENGL 151
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course is designed for students to learn and apply psychological principles and theories to their everyday life and foster their personal and social adjustment. This includes an examination of different psychological perspectives and their theoretical foundations as well as the influence of culture, society, gender, ethnicity, historical cohort and socio-economic status. Furthermore, students shall learn how scientists, clinicians and other practitioners study psychology. Lastly, this course should facilitate student understanding of other social sciences and improve critical thinking skills. Field trips may be required. Not repeatable. Transfer: (CSU/UC) (CSU-GE: E) C-ID: (PSY 115)

PSYCH 35—Introduction to Drugs and Behavior, 3 units
Recommended for Success: PSYCH 1
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This course provides an overview of the epidemiology and toxicology of substance abuse and its relevance to personal and public health. Students will be introduced to the concept of substance abuse and dependence, the definition of licit and illicit drugs, and the pharmacologic, neurologic and physiologic effects of selected substances on the human brain and their psychological functioning and well being. Political, social and economic factors involved in the supply and demand for drugs will be discussed. Epidemiologic data on the prevalence, incidence and trends of smoking, alcohol, prescription and other drug dependencies in the U.S. will be covered, as well as risk factors associated with the use and abuse of these substances. Current options for recovery and a survey of local resources will be reviewed. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D, E) (IGETC: 4I) C-ID: (PHS 103)

PSYCH 40—Stress Management, 3 units
Recommended for Success: ENGL 151
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU) (CSU-GE: E)
PSYCH 52—Introduction to Peer Support for Psychosocial Rehabilitation, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)

PSYCH 56 — Introduction to Psychosocial Rehabilitation, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU)
SIGN (SIGN LANGUAGE)

SIGN 40A — ASL: Beginning Communication with the Deaf, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C2)

SIGN 40B — ASL: Elementary Communication with the Deaf, 3 units
Prerequisite(s): Completion of SIGN 40A with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This is an elementary level 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. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B, 6A)

SIGN 40C — ASL: Intermediate Communication with the Deaf, 3 units
Prerequisite(s): Completion of SIGN 40B with at least a C or P
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning Hours
This is an intermediate course in ASL for improving speed and fluency. Not repeatable. Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B, 6A)

SKLDV (SKILLS DEVELOPMENT)

SKLDV 610 — Introduction to Computer Access, 1 unit
Enrollment limited to: Intended for students with disabilities but open to all students who are capable of profiting from the instruction offered
54 Laboratory Hours = 54 Total Student Learning 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. Not repeatable. Grading: (P/NP only)

The following courses are noncredit and are not applicable for graduation and/or transfer.

SKLDV (Noncredit courses in Skills Development)

SKLDV 410 — Supervised Tutoring
54 Laboratory Hours = 54 Total Student Learning Hours
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. Unlimited repeats. Non-graded.

SKLDV 700 — GED Preparation
54 Lecture Hours = 54 Total Student Learning Hours
Designed to teach the general skills needed to pass the General Educational Development test. Unlimited repeats. Non-graded.

SKLDV 701 — Life Strategies for Success
18 Lecture Hours, 18 Laboratory Hours = 36 Total Student Learning Hours
Students will learn and practice skills and strategies that will assist them in developing and implementing a personal plan for achieving their life goals. Unlimited repeats. Non-graded.
SKLDV 703 — Practical Money Skills for Life
9 Lecture Hours, 9 Laboratory Hours = 18 Total Student Learning Hours
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. Unlimited repeats. Non-graded.

SKLDV 705 — Preparation for Citizenship Test
Prerequisite(s): Basic literacy in home language and mid-beginning ESL
18 Lecture Hours = 18 Total Student Learning Hours
This course will prepare you to take each section of the U.S. Citizenship Test and it will cover topics such as Civics, the U.S. Government, History, Geography, Reading, and Writing. It will also cover tips on how to study for the test and how to most effectively prepare yourself for the test. Unlimited repeats. Non-graded.

SKLDV 706 — GED: Math and Language Arts
54 Lecture Hours = 54 Total Student Learning Hours
Designed to teach the general skills to pass the General Educational Development (GED) test in the subjects of Math and Language Art & Reasoning. Unlimited repeats.

SKLDV 707 — GED: Science & Social Studies
Prerequisite(s): Completion of SKLDV 706 with a P
54 Lecture Hours = 54 Total Student Learning Hours
Designed to teach the general skills needed to pass the General Educational Development test in the subjects of Science and Social Studies. Unlimited repeats.

SKLDV 710 — Independent Living Skills
18 Lecture Hours, 18 Laboratory Hours, 36 Out-of-Class Hours = 72 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities who are working toward independent living situations and employment. The course addresses skills and competencies relevant to those wishing to live and work more independently. Instruction is provided in the community, on campus and in the classroom. Unlimited repeats.

SKLDV 711 — Self-Advocacy Skills
9 Lecture Hours, 9 Laboratory Hours, 18 Out-of-Class Hours = 36 Total Student Learning Hours
This course is designed to provide self-advocacy and personal empowerment for students with verified learning, developmental, or physical disabilities. Topics include individual & group social skills, pre-vocational skills, and social and community integration. Unlimited repeats.

SKLDV 712 — Social Skills
9 Lecture Hours, 9 Laboratory Hours, 18 Out-of-Class Hours = 36 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities to provide instruction in computer operation, word processing, and the use of adaptive equipment. Unlimited repeats.

SKLDV 713 — Computer Skills
9 Lecture Hours, 9 Laboratory Hours, 18 Out-of-Class Hours = 36 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities to enhance independence by introducing safe practices and knowledge for using public transportation and pay to ride services. Unlimited repeats.

SKLDV 714 — Public Transportation Skills
9 Lecture Hours, 9 Laboratory Hours, 18 Out-of-Class Hours = 36 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities to teach techniques, skills, and theories of empowering communication for entering and succeeding in the workplace and professional setting. Principles and professional practices of leading at work, interpersonal and collaborative workplace relationships. Unlimited repeats.

SKLDV 715 — Communication in the Workplace
9 Lecture Hours, 9 Laboratory Hours, 18 Out-of-Class Hours = 36 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities who are working toward independent living situations and employment. The course addresses skills and competencies relevant to those wishing to live and work more independently. Instruction is provided in the community, on campus and in the classroom. Unlimited repeats.
SKLDV 716 — Personal Budgeting
9 Lecture Hours, 18 Laboratory Hours, 18 Out-of-Class Hours = 45 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities and will provide money management skills. This is an introductory class that teaches banking and budgeting vocabulary and step by step on how to open and manage a checking account as well as creating personal budgets. Unlimited repeats.

SKLDV 717 — Job Skills
18 Lecture Hours, 18 Laboratory Hours, 36 Out-of-Class Hours = 72 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities to achieve their potential as independent members of the community. The course specifically seeks to support the development of specific job skills necessary to succeed in the workplace. Topics include time management, self-advocacy, understanding appropriate use of personal technology devices, workplace autonomy, receiving feedback, and customer service. Unlimited repeats.

SKLDV 718 — Personal Safety
18 Lecture Hours, 18 Laboratory Hours, 36 Out-of-Class Hours = 72 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities to achieve their potential as independent members of the community. The course specifically seeks to support student in identifying and understanding safe and unsafe situations and how to respond in unsafe situations as well as basic first aid. Additionally, students will develop an understanding of appropriate behaviors in various situation which will help keep them and others safe. Unlimited repeats.

SKLDV 719 — Getting the Job You Want
9 Lecture Hours, 9 Laboratory Hours, 18 Out-of-Class Hours = 36 Total Student Learning Hours
This course is designed for students with verified learning, developmental, or physical disabilities to achieve their potential as independent members of the community. The course specifically seeks to support student understanding of the job application process including resumes, cover letters and interview skills. Unlimited repeats.

SKLDV 792 — Basic Skills for Employment & Education
Formerly listed as: SKLDV 792 — Applied Skills
18 Lecture Hours, 36 Laboratory Hours = 54 Total Student Learning 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). Unlimited repeats. Non-graded.
SOCIAL (SOCIOLGY)

SOCIO 1—Introduction to Sociology, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (SOCIO 101) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4J) C-ID: (SOCI 110)

SOCIO 2—American Society: Social Problems and Deviance, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 equivalent: (SOCIO 102) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4J) C-ID: (SOCI 115)

SOCIO 5—Ethnicity and Ethnic Relations in America, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (SOCIO 150) Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4C, 4J) C-ID: (SOCI 150)

SOCIO 7/ANTHR 7—Gender, Culture and Society, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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 biocultural 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 ANTHR 7 or SOCIO 7. Not repeatable. Transfer: (CSU/UC) (CSU-GE: D) (IGETC: 4D) C-ID: (SOCI 140)

SOCIO 12—Sociology of the Family, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. MJC equivalent: (SOCIO 125) Transfer: (CSU/UC) (CSU-GE: E) (IGETC: 4J) C-ID: SOCI 130

SOCIO 28—Death and Dying, 3 units
54 Lecture Hours, 108 Out-of-Class Hours = 162 Total Student Learning 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. Not repeatable. Transfer: (CSU) (CSU-GE: E)
SPAN (SPANISH)

SPAN 1A—Spanish: Beginning, 5 units

**Recommended for Success:** ENGL 151 or eligibility for ENGL 1A

90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning 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. Not repeatable. MJC equivalent: (SPAN 101) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 6A) C-ID: (SPAN 100)

SPAN 1B—Spanish: Beginning, 5 units

**Prerequisite(s):** Completion of SPAN 1A with at least a C or P or two years of high school Spanish

90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours

Continuation of SPAN 1A, fundamentals of spoken and written Spanish. Not repeatable. MJC equivalent: (SPAN 102) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B, 6A) C-ID: (SPAN 110)

SPAN 2A—Spanish: Intermediate, 5 units

**Prerequisite(s):** Completion of SPAN 1B with at least a C or P or three years of high school Spanish or equivalent

90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours

Continuation of SPAN 1B. Includes grammar, conversation and discussion, composition and reading. Not repeatable. MJC equivalent: (SPAN 103) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B, 6A) C-ID: (SPAN 200)

SPAN 2B—Spanish: Intermediate, 5 units

**Prerequisite(s):** Completion of SPAN 2A with at least a C or P

90 Lecture Hours, 180 Out-of-Class Hours = 270 Total Student Learning Hours

A continuation of intermediate-level SPAN 2A. MJC equivalent: (SPAN 104) Transfer: (CSU/UC) (CSU-GE: C2) (IGETC: 3B, 6A) C-ID: (SPAN 210)

SPEECH COMMUNICATION

See COMM

TAID (TEACHER AIDE TRAINING)

TAID 97—Work Experience as a Teacher Aide, 1 to 4 units

1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours

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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only) Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.
WKEXP (WORK EXPERIENCE)
Check individual disciplines for WKEXP offerings. All CSU campuses will accept Work Experience; see a counselor or the Work Experience Coordinator in the Career Technical Education Division for limitations. Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

WKEXP 97—General Work Experience, 5 to 4 units
0.5 Unit: 30 Unpaid Hours, 37.5 Paid Hours
1 Unit: 60 Unpaid Hours, 75 Paid Hours
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
75 hours paid employment equals 1 unit of credit.
60 hours unpaid employment equals 1 unit of credit.
This provides students an opportunity to experience supervised employment. The student's employment must be related to educational or occupational goals. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only)
Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

WT (WELDING TECHNOLOGY)

WT 97—Work Experience in Welding Technology, 2-4 units
2 Units: 120 Unpaid Hours, 150 Paid Hours
3 Units: 180 Unpaid Hours, 225 Paid Hours
4 Units: 240 Unpaid Hours, 300 Paid Hours
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. May be repeated for no more than a total of 16 units of credit less any units earned in any other Work Experience course. Grading: (P/NP only)
Transfer: (CSU-Transfer credit limited. See a counselor.) Visit www.gocolumbia.edu/career_technical/workexperience.php for additional information.

WT 101—Practical Laboratory, 1 unit
Prerequisite(s): Completion of WT 121 with at least a C or P
54 Laboratory Hours = 54 Total Student Learning Hours
Materials fee required
The student shall gain practical welding experience by working on individual projects (including certification projects). Emphasis is on quality, appearance and function. Not repeatable.

WT 103/ART 103—Practical Laboratory - Metal Sculpture, 1 unit
Prerequisite(s): Completion of WT 165 or ART 165 with at least a C or P
54 Laboratory Hours = 54 Total Student Learning Hours
Materials fee required
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. Not repeatable.
WT 121—Arc/Gas Welding, 3 units
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
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. Not repeatable. C-ID: (WELD 101X)

WT 122—MIG Welding (GMAW/FCAW), 3 units
Prerequisite(s): Completion of WT 121 with at least a C or P
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Covers welding safety, welding symbols and detail drawings, characteristics of metallurgy, Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW). 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. Not repeatable. C-ID: (WELD 102X & 103X)

WT 123—TIG Welding (GTAW), 3 units
Prerequisite(s): Completion of WT 121 with at least a C or P
36 Lecture Hours, 54 Laboratory Hours, 72 Out-of-Class Hours = 162 Total Student Learning Hours
Materials fee required
Covers welding safety, Gas Tungsten Arc Welding (GTAW), including Mild Steel, Stainless Steel and Aluminum 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. Not repeatable. C-ID: (WELD 104X)

WT 160/AT 160 — Exploring Technical Trades, 6 units
54 Lecture Hours, 162 Laboratory Hours, 108 Out-of-Class Hours = 324 Total Student Learning Hours
Materials fee required
Students will experience topics and engage in projects from the auto body/collision repair, automotive technology, and welding technology programs. Career and educational pathways will be emphasized. Field trips may be required. Not repeatable.

WT 165/ART 165 — Metal Sculpture, 1.5 units
9 Lecture Hours, 54 Laboratory Hours, 18 Out-of-Class Hours = 81 Total Student Learning Hours
Materials fee required
An introduction to various metal working techniques with an emphasis on aesthetic design and quality of metal joining. A brief introduction to M.I.G. welding will be included. Credit may be earned for only one of the following: ART 165 or WT 165. Not repeatable.

WT 166/ART 166 — Metal Sculpture Projects, 1 unit
Prerequisite(s): Completion of WT 165/ART 165 with at least a C or P
54 Laboratory Hours = 54 Total Student Learning Hours
Materials fee required
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 once for WT 166 or ART 166. Field trips may be required. Not repeatable.