Courses which meet the requirements for General Education for the Associate Degree, CSU Certification and the Intersegmental General Education Transfer Curriculum (IGETC) are identified after each course description. The California Articulation Number (CAN) is included below the course title. The CSU and UC indicators are also included after the course description and mean that these courses transfer for at least elective credit to these two public systems of higher education in California.

If you would like more information on how courses meet your specific Associate Degree or transfer objectives, please see a counselor.

### ACCOUNTING

#### BUSINESS (ACCOUNTING) COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>109</td>
<td>ELEMENTARY ACCOUNTING</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None Corequisite: None Recommended Preparation: None 3 hours lecture</td>
<td></td>
<td>One-semester introduction to elementary accounting principles. Includes journals, ledgers, worksheets and financial statements for the single proprietorship. Designed for the clerical employee or for those who do not intend further study of accounting. (May not be substituted for BUS 120, where required. Not open to students with credit in BUS 120.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>FINANCIAL ACCOUNTING</td>
<td>4</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: None Corequisite: None Recommended Preparation: None 4 hours lecture</td>
<td></td>
<td>Introduces students to the accounting function and how it is used within our economic society. Views accounting as an information-generating system that communicates financial data to support end users in their economic decision-making. Includes the theory and concepts of accounting, as well as their application to the recording of financial information for the three types of business organizations: sole proprietorship, partnership and corporation. Emphasis on the corporate form of organization. UC credit limit, CSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>MANAGERIAL ACCOUNTING</td>
<td>4</td>
<td>BUS 120 with a grade of &quot;C&quot; or &quot;CR&quot; or better or equivalent</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: BUS 120 Corequisite: None Recommended Preparation: None 4 hours lecture</td>
<td></td>
<td>Introduces students to the concepts, methods and procedures for the development and use of accounting information to support and assist management in their internal cost accounting processes and financial decision-making. Includes the theory and concepts of cost accounting, use of financial and accounting information for planning, budgeting and control of operations, and methods and analysis to assist managerial accountants in decision-making activities. UC credit limit, CSU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
122 INTERMEDIATE ACCOUNTING 4 UNITS
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
4 hours lecture
In-depth study of accounting theories and principles underlying financial statements and the determination of net income. Survey of basic accounting principles. Study of corporate balance sheet items and the analytical processes of statement preparation which include funds-flow and cash-flow reporting.

124 AUDITING 3 UNITS
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the role of the auditor in the American economy including the general principles and concepts of auditing duties, ethics, liability, responsibilities of the auditor, and procedures for verification of financial statements including EDP statements.

129 PAYROLL ACCOUNTING AND BUSINESS TAXES 2 UNITS
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
2 hours lecture
Provides students with an in-depth understanding of payroll accounting. Includes calculations of gross to net pay, coverage of federal and state withholdings and deductions, recording of payroll transactions into the accounting records, and filing of federal and state payroll tax forms. Also includes consideration of factors which determine employee versus independent contractor status, and coverage of business taxes such as sales and property taxes and their filing requirements.

151 CORPORATE INCOME TAX ACCOUNTING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduces students to federal taxation and focuses on tax law as applied to the non-individual tax entity. Includes an overview of the income tax environment. Topics include corporations, regular and “S,” partnerships, estate and trust taxation, non-profit organization and family tax planning, and the solving of specific problems related to the filing of Federal Forms 1120, 1120S, 1065, 1041, 709, 706.

150 INDIVIDUAL INCOME TAX ACCOUNTING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduces students to federal taxation and focuses on tax preparation as applied to the individual taxpayer. Includes an overview of the income tax environment. Topics include filing status, personal and dependency exemption, itemized and standard deductions, and the solving of specific problems related to the filing of the Federal Form 1040.

162 ANALYSIS OF FINANCIAL STATEMENTS 3 UNITS
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to explore the characteristics of financial statements to analyze the reported results, and to place the findings from such an analysis in proper perspective. Students will learn how to apply ratios to financial statements, and to interpret their outcomes in order to draw various inferences and/or conclusions from their results.

176 COMPUTERIZED ACCOUNTING APPLICATIONS 2 UNITS
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
1 hour lecture, 3 hours laboratory
Beginning course consisting of hands-on use of accounting software packages used on microcomputers. Especially beneficial to students, teachers and professionals who are using, or plan to use, microcomputers in a business environment.
**AMERICAN SIGN LANGUAGE**

**120 BEGINNING SIGN LANGUAGE**  3 UNITS
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Introduction to American Sign Language as used within the deaf culture. Instruction in the basic structure of the language and development of its use. Introduction to the deaf culture and history of the language.  
UC, CSU, AA/AS GE, CSU GE, IGETC

**121 INTERMEDIATE SIGN LANGUAGE**  3 UNITS
Prerequisite: ASL 120 or equivalent  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Provides an opportunity for students to progress and enhance their ability to communicate in American Sign Language. Students will also expand their knowledge of the deaf community, culture and history.  
UC, CSU, IGETC

**199 SPECIAL STUDIES OR PROJECTS IN AMERICAN SIGN LANGUAGE**  1-3 UNITS
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
3-9 hours  
Individual study, research or projects in the field of American Sign Language under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.  
UC, CSU

**220 ADVANCED SIGN LANGUAGE**  3 UNITS
Prerequisite: ASL 121 or equivalent  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Provides an opportunity for students to greatly improve their ability to communicate in American Sign Language by studying the nuances and intricacies of the language. Students will also enhance their awareness of the deaf community, culture and history.  
UC, CSU

**298 SELECTED TOPICS IN AMERICAN SIGN LANGUAGE**  1-3 UNITS
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
1-9 hours  
Selected topics in American Sign Language not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

**299 SELECTED TOPICS IN AMERICAN SIGN LANGUAGE**  1-3 UNITS
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
1-9 hours  
Selected topics in American Sign Language not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.  
UC, CSU
ANTHROPOLOGY

120 CULTURAL ANTHROPOLOGY 3 UNITS
(CAN ANTH 4)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
The nature of culture; cultural growth and history; survey of the range of cultural phenomena including material culture, social organization, kinship systems, religion, language and other topics; systematic study of similarities and differences among cultures through investigation of selected societies.
UC, CSU, AA/AS GE, IGETC, CSU GE

130 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 3 UNITS
(CAN ANTH 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
People’s place in nature; physical and behavioral characteristics of primates; principles of evolution and basic outline of human genetics; description of the record of early humans and discussion of explanation of fossils; present day variability among human populations.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN ANTHROPOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Anthropology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298 SELECTED TOPICS IN ANTHROPOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Anthropology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
UC, CSU

299 SELECTED TOPICS IN ANTHROPOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Anthropology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. UC, CSU
## ARABIC

### 120 ARABIC I 5 UNITS
- **Prerequisite:** None
- **Corequisite:** None
- **Recommended Preparation:** None
- **5 hours lecture**
- **Introductory course to the Arabic language and the culture of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the beginning novice level.**
- **Since the focus will be on basic communication skills, the class will be conducted in modern standard Arabic as much as possible. While becoming familiar with the Arabic speaking world, students will learn structures that will enable them to function in Arabic in everyday contexts.**
- **AA/AS GE, CSU**

### 121 ARABIC II 5 UNITS
- **Prerequisite:** ARBC 120 with a grade of “C” or “CR” or better or two years of high school Arabic or equivalent
- **Corequisite:** None
- **Recommended Preparation:** None
- **5 hours lecture**
- **Continuation of ARBC 120. Continues to develop oral and written skills based on practical everyday needs. Students with three years of high school Arabic should enroll in ARBC 220.**
- **AA/AS GE, CSU**

### 199 SPECIAL STUDIES OR PROJECTS IN ARABIC 1-3 UNITS
- **Prerequisite:** Varies with topic
- **Corequisite:** Varies with topic
- **Recommended Preparation:** Varies with topic
- **3-9 hours**
- **Individual study, research or projects in the field of Arabic under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.**
- **CSU**

### 220 ARABIC III 5 UNITS
- **Prerequisite:** ARBC 121 with a grade of “C” or “CR” or better or three years of high school Arabic or equivalent
- **Corequisite:** None
- **Recommended Preparation:** None
- **5 hours lecture**
- **Continuation of ARBC 121. Continues to develop oral, listening, reading and writing skills in order to acquire proficiency in Arabic. Students with four years of high school Arabic should enroll in ARBC 221.**
- **AA/AS GE, CSU**

### 221 ARABIC IV 5 UNITS
- **Prerequisite:** ARBC 220 with a grade of “C” or “CR” or better or four years of high school Arabic or equivalent
- **Corequisite:** None
- **Recommended Preparation:** None
- **5 hours lecture**
- **Continuation of ARBC 220. Continues to develop oral, reading, writing and listening skills in order to improve proficiency in Arabic.**
- **AA/AS GE, CSU**

### 250 CONVERSATIONAL ARABIC I 3 UNITS
- **Prerequisite:** ARBC 121 or three years of high school Arabic or equivalent
- **Corequisite:** None
- **Recommended Preparation:** None
- **3 hours lecture**
- **Continues to develop oral, reading, writing and listening skills, but with an emphasis in oral proficiency.**
- **AA/AS GE, CSU**

### 251 CONVERSATIONAL ARABIC II 3 UNITS
- **Prerequisite:** ARBC 250 or four years of high school Arabic or equivalent
- **Corequisite:** None
- **Recommended Preparation:** None
- **3 hours lecture**
- **Continues to develop oral, reading, writing and listening skills, but with an emphasis in oral proficiency.**
- **AA/AS GE, CSU**

### 298 SELECTED TOPICS IN ARABIC 1-5 UNITS
- **Prerequisite:** Varies with topic
- **Corequisite:** Varies with topic
- **Recommended Preparation:** Varies with topic
- **1-15 hours**
- **Selected topics in Arabic not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.**

### 299 SELECTED TOPICS IN ARABIC 1-5 UNITS
- **Prerequisite:** Varies with topic
- **Corequisite:** Varies with topic
- **Recommended Preparation:** Varies with topic
- **1-15 hours**
- **Selected topics in Arabic not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.**
- **CSU**
### Aramaic

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>120</strong></td>
<td><strong>ARAMAIC I</strong></td>
</tr>
<tr>
<td>5 UNITS</td>
<td>Prerequisite: None</td>
</tr>
<tr>
<td>Corequisite: None</td>
<td></td>
</tr>
<tr>
<td>Recommended Preparation: None</td>
<td></td>
</tr>
<tr>
<td>5 hours lecture</td>
<td></td>
</tr>
<tr>
<td>Acquaints students with the classical-modern Aramaic alphabet, essentials of grammar and pronunciation and the Chaldean-Assyrian culture and civilization. The origin of the Semitic languages will be surveyed through selected readings and discussions.</td>
<td></td>
</tr>
<tr>
<td>UC, CSU, AA/AS GE, CSU GE</td>
<td></td>
</tr>
</tbody>
</table>

| **121** | **ARAMAIC II** |
| 5 UNITS | Prerequisite: ARAM 120 |
| Corequisite: None |
| Recommended Preparation: None |
| 5 hours lecture |
| Helps students to further their knowledge of classical-modern Aramaic grammar. Students will study nouns, pronouns, adjectives and basic verb forms. |
| UC, CSU, AA/AS GE, IGETC, CSU GE |

| **199** | **SPECIAL STUDIES OR PROJECTS IN ARAMAIC** |
| 1-3 UNITS | Prerequisite: Varies with topic |
| Corequisite: Varies with topic |
| Recommended Preparation: Varies with topic |
| 3-9 hours |
| Individual study, research or projects in the field of Aramaic under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units. |
| UC, CSU |

| **220** | **ARAMAIC III** |
| 5 UNITS | Prerequisite: ARAM 121 |
| Corequisite: None |
| Recommended Preparation: None |
| 5 hours lecture |
| Helps students to further their knowledge of classical-modern Aramaic grammar. Primary emphasis on the conjugation of verbs, introduction to Aramaic literature and the translation of ancient and modern text materials. Students will also learn how to compose and write essays in modern Aramaic (Chaldean). |
| UC, CSU, AA/AS GE, CSU GE, IGETC |

| **298** | **SELECTED TOPICS IN ARAMAIC** |
| 1-5 UNITS | Prerequisite: Varies with topic |
| Corequisite: Varies with topic |
| Recommended Preparation: Varies with topic |
| 1-15 hours |
| Selected topics in Aramaic not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. **Offered as Credit/No Credit only.** Non-associate degree applicable. |

| **299** | **SELECTED TOPICS IN ARAMAIC** |
| 1-5 UNITS | Prerequisite: Varies with topic |
| Corequisite: Varies with topic |
| Recommended Preparation: Varies with topic |
| 1-15 hours |
| Selected topics in Aramaic not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. |
| UC, CSU |
100 ART APPRECIATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
In this introductory course students learn how to examine, compare, analyze, evaluate, interpret, and discuss works of visual art within their cultural contexts. Art media for study will include drawing, painting, printmaking, photography, sculpture, ceramics, textiles, film, architecture, etc. Works for examination will encompass representative artistic styles from western and other major world cultures, and will also include the artistic contributions of women and minority cultures.
UC, CSU, AA/AS GE, IGETC, CSU GE

120 TWO-DIMENSIONAL DESIGN 3 UNITS
(CAN ART 14)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Develops an understanding of how humans communicate with the visual language. Provides the concepts and vocabulary necessary to analyze and build designs that emphasize unity or diversity and teaches how to make and use patterns, gradients, balance, proportions, focal points, eye movements, major divisions, formats, subtractive color mixing and color harmony. This course is important for anyone who designs with an aesthetic component, i.e., drawing, painting, photography, film, video, theater, illustration, graphic design, cartooning, animation, architecture, sculpture, ceramics, jewelry design, crafts, interior design, landscape design, etc.
UC, CSU, AA/AS GE, CSU GE

121 PAINTING I 3 UNITS
(CAN ART 10)
Prerequisite: ART 120
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Emphasizes painting tools, materials, techniques and color principles. Students will develop skill in handling form, space, and plastic aspects of acrylic and/or oil paints.
UC, CSU

124 DRAWING I 3 UNITS
(CAN ART 8)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Forms the physical and intellectual skills necessary to think visually. Develops an understanding of the fundamental drawing tools and techniques used by old and new master artists alike. Line and shape making strategies will be explored through a variety of right and left brain techniques. The use of scientific perspective, modeling and texture will be integrated into the drawing process. This course is important for anyone who must think and organize visually, i.e., drawing, painting, photography, film, video, theater, illustration, graphic design, cartooning, animation, architecture, sculpture, ceramics, jewelry design, crafts, interior design, landscape design, etc.
UC, CSU, AA/AS GE, CSU GE

125 DRAWING II 3 UNITS
Prerequisite: ART 124
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Builds on the drawing techniques and composition concepts covered in ART 124. Introduces brush, pen and ink into the drawing process with an emphasis on line quality and modeling using washes, hatching and stippling. Colored pencil and pastel mediums are explored using a variety of linear and tonal techniques. Scientific perspective is extended from ART 124 to include measuring, inclining planes, circles, shadows and reflections. This course is important for anyone wanting to learn new mediums to address creative problem-solving and to refine drawing skills.
UC, CSU

129 THREE-DIMENSIONAL DESIGN 3 UNITS
(CAN ART 16)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Introduction to the basic formal principles of relief and round sculpture. Students will learn to control form, shape, line, texture, light and color in a variety of techniques and mediums.
UC, AA/AS GE, CSU GE

135 WATERCOLOR I 3 UNITS
Prerequisite: ART 124
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Introduction to basic watercolor tools, materials and techniques. Emphasizes color principles and skill development in handling form, space and the plastic aspects of paint.
UC, CSU
140 HISTORICAL ART I: Prehistoric to 1250 A.D. 3 UNITS (CAN ART 2; CAN ART SEQ A = ART 140+141)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Historical survey of the major art forms (primarily architecture, sculpture, ceramics, painting) of the western world from prehistory to circa 1250 A.D.
UC, CSU, AA/AS GE, IGETC, CSU GE

141 HISTORICAL ART II: 1250 A.D. to Present Time 3 UNITS (CAN ART 4; CAN ART SEQ A = ART 140+141)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Historical survey of the major art forms (primarily architecture, sculpture, ceramics, painting, printmaking, photography) of the western world from the late Gothic era to the present.
UC, CSU, AA/AS GE, IGETC, CSU GE

144 ARCHITECTURE OF THE 20TH CENTURY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Meet the 20th century masters of the giant movements in architecture and environment. Global politics and social economics as the influential factors for the concepts, styles, philosophy and artistic expressions. Experience the landmark sites around the world via film and slide projections, independent studies and field trips.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN ART 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Art under instructor guidance. Written reports and periodic conferences are required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

220 PAINTING II 3 UNITS
Prerequisite: ART 121
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Continuation of Painting I with emphasis on creative problem-solving skills. Student will develop a personal style of expression.
UC, CSU

221 PAINTING III 3 UNITS
Prerequisite: ART 220
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Offers a wider selection of painting mediums to include acrylic, oil, egg tempera, casein and encaustic. Students will continue developing a personal style of expression.
UC, CSU

222 PAINTING IV 3 UNITS
Prerequisite: ART 221
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Focuses on a series of paintings that develop a personal theme or statement. Advanced painting techniques will be combined with advanced compositional devices.

224 DRAWING III 3 UNITS
Prerequisite: ART 125
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
The drawing mediums, skills, techniques and composition concepts used in ART 124 and 125 will be applied to a variety of subject matters. Gives students the opportunity to draw different subject matters including but not limited to animals, plants, still life, landscapes, seascapes, cityscapes, etc. Emphasis on making effective compositions with good craft.
UC, CSU

230 FIGURE DRAWING I 3 UNITS (CAN ART 24)
Prerequisite: ART 124
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Utilizes the skills and concepts developed in ART 124 to address the drawing of the nude human figure. Students will learn how articulation, standard proportion, bones and muscles influence the rendering of the human form. Drawing will be done from live models with studio lighting. Emphasis on representational drawing with line and value. This course is important for anyone dealing with the human figure, i.e., drawing, painting, sculpture, photography, illustration, graphic design, fashion design, etc.
UC, CSU
231 FIGURE DRAWING II 3 UNITS
Prerequisite: ART 230
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Builds on the concepts and skills developed in ART 230. Surface anatomy related to the bone and muscle structure of the human form is studied along with the proportions and anatomy of the human head. Students will work with achromatic and chromatic drawing mediums.
UC, CSU

232 FIGURE DRAWING III 3 UNITS
Prerequisite: ART 231
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Concentrates on integrating the human figure into a compositional environment. Figure drawing techniques from ART 230 and 231 will be integrated into the design process.
UC, CSU

233 FIGURE DRAWING IV 3 UNITS
Prerequisite: ART 232
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Focuses on figurative artwork that develops a personal theme or statement. Students will be asked to explore several advanced compositional devices while pursuing their themes. This class emphasizes portfolio preparation.
CSU

235 WATERCOLOR II 3 UNITS
Prerequisite: ART 135
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Continuation of Watercolor I techniques with emphasis on creative problem solving and aesthetic compositions.
UC, CSU

236 WATERCOLOR III 3 UNITS
Prerequisite: ART 235
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Continuation of Watercolor II skill and composition techniques. Students will develop a personal style of expression.
UC, CSU

298 SELECTED TOPICS IN ART 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Art not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN ART 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Art not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
## Astronomy

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>Descriptive Astronomy</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Covers the development of modern astronomy and its techniques. Emphasis on the vocabulary of astronomy and the current understanding of our solar system, stellar evolution, our galaxy, and the structure of the universe. UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>112</td>
<td>General Astronomy Laboratory</td>
<td>1</td>
<td>ASTR 110 or concurrent enrollment</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Planet, stellar and lunar studies; acquaintance with constellations and astronomical coordinates; use of astronomical instruments. UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>199</td>
<td>Special Studies or Projects in Astronomy</td>
<td>1-3</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>3-9</td>
<td>Individual study, research or projects in the field of Astronomy under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units. UC, CSU</td>
</tr>
<tr>
<td>298</td>
<td>Selected Topics in Astronomy</td>
<td>1-3</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>1-9</td>
<td>Selected topics in Astronomy not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable. UC, CSU</td>
</tr>
<tr>
<td>299</td>
<td>Selected Topics in Astronomy</td>
<td>1-3</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>1-9</td>
<td>Selected topics in Astronomy not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. UC, CSU</td>
</tr>
</tbody>
</table>

## Automotive Technology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>099</td>
<td>Introduction to Automotive Technology</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Designed to present basic information about automotive systems. Taught with the consumer in mind, but also serves as an excellent introductory course for those interested in the automotive technology major. CSU</td>
</tr>
<tr>
<td>100</td>
<td>Introduction to Automotive Technology Laboratory</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Basic laboratory environment designed to prepare students for entry into the Automotive Technology major. Covers repairing, servicing and basic diagnostic procedures of a typical passenger car or light truck. CSU</td>
</tr>
<tr>
<td>120</td>
<td>Automotive Tune-Up and Diagnosis</td>
<td>5</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>In-depth course beginning with a review of basic engine systems followed by a detailed study of tune-up procedures utilizing state of the art equipment. Emphasis on practical experience in actual repairs under simulated shop conditions. Preparation for ASE Certification. CSU</td>
</tr>
<tr>
<td>121</td>
<td>Emission Control License</td>
<td>5</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Theory of operation, repair and maintenance of emission control devices with additional study of licensing laws and regulations required for smog license. Each student is expected to take the State of California smog test for qualified test and repair mechanics. Approved by the State of California (120-hour Clean Air Car Course) to prepare the student for taking the Bureau of Automotive Repair’s Licensed Smog Check Mechanic Certification test. Includes an introduction to testing and repairing computerized engine controls. CSU</td>
</tr>
</tbody>
</table>

**CSU**
122 AUTOMOTIVE ELECTRICAL SYSTEMS 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Basic principles of electricity as applied to automobiles. Comprehensive investigation of automotive electrical systems including periodic maintenance, diagnosis, component servicing and adjustment. Preparation for State of California Lamp Adjusters License and ASE Certification.

CSU

123 COMPUTERIZED ENGINE CONTROLS 5 UNITS
Prerequisite: AUTO 120 or 3 years tune-up work experience or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
In-depth study of the use of computers for the control of various engine functions. Topics include: input and output devices, basic computer operation, closed loop fuel control, computer-assisted spark advance, computer-assisted carburetion, computer-controlled fuel injection, scan tool diagnostics, digital lab scope diagnostics, distributorless ignition systems, OBDII diagnostic.

CSU

124 ENGINE DRIVABILITY LABORATORY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
9 hours laboratory
Intensive, advanced electronic engine control lab course with emphasis on diagnosis of automotive computer systems utilizing state of the art test equipment.

CSU

125 ADVANCED AUTO TUNE-UP AND DIAGNOSIS 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in tune-up and diagnosis designed to develop greater student performance under simulated industry conditions. Preparation for ASE Certification.

CSU

129 INTRODUCTION TO ALTERNATIVE FUELS 3.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1.5 hours laboratory
Introductory course in the study of alternative fuels and their delivery systems for automotive and light truck application. The main focus will be centered around Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG) systems. Additionally, electric, hybrid and fuel cell technologies will be discussed. Topics include: environmental concerns, pros and cons of various alternative fuel options, properties and chemical structure of various alternative fuels, safety aspects of each fuel, fuel storage, fuel metering control, retrofitting, installation, and diagnosis and troubleshooting. Recommended that students have a working knowledge of automotive electricity, automotive tune-up and diagnosis, and automotive computer systems.

CSU

130 AUTOMOTIVE BRAKES AND BRAKE LICENSE 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Detailed study of automotive brake system service procedures. Laboratory experience covers drum and disc brake system inspection, adjustment and repair procedures. Antilock brake systems. Preparation for State of California Official Brake Adjusters License and ASE Certification.

CSU

135 ADVANCED BRAKES 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in automotive brake systems emphasizing diagnosis. Designed to develop greater student performance under simulated industry conditions. Preparation for State of California Official Brake Adjusters License and ASE Certification.

CSU

140 FOUR WHEEL ALIGNMENT 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Four wheel alignment principles as applied to checking and correcting alignment settings. Repair and replacement of suspension components, computerized steering and ride controls. Additional training in wheel balancing. Emphasis on practical experience on “live” automobiles. Preparation for ASE Certification.

CSU
145 ADVANCED FOUR WHEEL ALIGNMENT 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in four wheel alignment emphasizing diagnosis and complete suspension system repair. Designed to develop greater student performance under simulated industry conditions. Preparation for ASE Certification.
CSU

152 DRIVE TRAIN SYSTEMS 4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture, 4.5 hours laboratory
In-depth study of hydraulic power transmission and control systems used in automatic transmissions including diagnosis and overhaul of actual transmissions to precise industry standards. Plus, theory of operation, diagnosis, repair and overhaul of manual transmissions, clutches, drivelines and differentials including four wheel drive and front wheel drive.
CSU

155 ADVANCED DRIVE TRAIN SYSTEMS 4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture, 4.5 hours laboratory
Advanced course in power drive systems emphasizing diagnosis. Designed to develop greater student performance under simulated industry conditions. Preparation for ASE Certification.
CSU

160 AIR CONDITIONING AND HEATING SYSTEMS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of refrigeration principles with emphasis on servicing, diagnosing, testing and repair or replacement of components. Emphasis on practical experience performing actual repairs. Preparation for ASE Certification and EPA-approved CFC Technician Certification.
CSU

165 ADVANCED AIR CONDITIONING AND HEATING SYSTEMS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Advanced course in automotive environmental control systems emphasizing diagnosis. Designed to develop greater student performance under simulated industry conditions. Preparation for ASE Certification.
CSU

170 ENGINE OVERHAUL 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles and assembly procedures. Emphasis on practical experience through actual shop training. Students are required to provide an auto engine for overhaul. Preparation for ASE Certification.
CSU

175 ADVANCED ENGINE OVERHAUL 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in engine overhaul designed to develop greater student performance under simulated industry conditions. Preparation for ASE Certification.
CSU

176 ENGINE MACHINING 5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Third course in the engine repair sequence. Student must have credit in engine overhaul and advanced engine overhaul prior to enrolling in this course. Topics include cylinder boring and honing, rod resizing, replacing valve guides and seats, thread repair, king-pin fitting, replacing wheel studs, pressing bearings, etc. Designed to prepare students for employment in the automotive machine shop field. Preparation for ASE Engine Machinist exams.
CSU

180 AUTOMOTIVE SERVICE ADVISOR 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Prepares the student for working as a service advisor for a large garage, such as a dealership. Covers service procedures, customer relations, repair orders and warranty policies. (Student must be prepared to visit a dealership to observe service advisors at work during normal working hours for approximately 4 hours.)
CSU
182 AUTOMOTIVE WORK EXPERIENCE 1-3 UNITS
Prerequisite: Completion of a minimum of 10 units in Automotive Program. Must meet State guidelines for work experience.
Corequisite: None
Recommended Preparation: None
5 hours paid or 4 hours unpaid work experience per week per unit
Students who are employed in the automotive trade full-time or part-time (paid or unpaid) and able to work the minimum required hours during the semester are eligible to enroll in this course. Assessment of student is performed by instructor in discussion with appropriate supervisor at place of employment. Allows students to further develop skills attained in the classroom setting. May be repeated up to 5 times for a maximum of 15 units.
CSU

190 ASSET – ORIENTATION, PDI AND LUBRICATION 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 3 hours laboratory
Introduction to the Ford sponsored ASSET program. Students will become familiar with dealership operations, vehicle pre-delivery inspection, and proper lubrication of the various systems of the modern automobile. Complemented by required work experience in the dealership.
CSU

191 ASSET – BRAKES AND ALIGNMENT 7 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory
Ford ASSET course to include a detailed study of modern automotive braking systems and service procedures. The laboratory will cover drum and disc brake systems inspection, adjustment and repair procedures. Also covers four wheel alignment principles as applied to checking and correcting alignment settings. Repair and replacement of suspension components. Additional training in wheel balancing. Emphasis on practical experience on "live" automobiles. Preparation for ASE Certification. Complemented by required work experience in the dealership.
CSU

192 ASSET – POWER TRAIN 7 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory
Ford ASSET course to include an in-depth study of hydraulic power transmission and control systems used in automatic transmissions, and diagnosis and overhaul of actual transmissions to precise industry standards. Plus, theory of operation, diagnosis, repair and overhaul of manual transmissions, clutches, drivelines and differentials including four wheel drive and front wheel drive. Preparation for ASE Certification. Complemented by required work experience in the dealership.
CSU

193 ASSET – ENGINE REPAIR 4.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 4.5 hours laboratory
Ford ASSET course to include diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles, assembly procedures and in-car repairs. Engine design theory will be discussed. Preparation for ASE Certification. Complemented by required work experience in the dealership.
CSU

194 ASSET – TUNE-UP AND EMISSIONS 7 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory
Ford ASSET course to include an in-depth study of tune-up and emission systems, beginning with a review of basic engine systems followed by a detailed study of tune-up and emission system diagnostic and repair procedures utilizing state of the art equipment. Includes the State of California Bureau of Automotive “120 Hour Clean Air Car Course,” which fulfills requirements to enable students to take the State of California test for smog technicians. Preparation for ASE Certification. Complemented by required work experience in the dealership.
CSU
195 **ASSET – ELECTRONIC ENGINE CONTROLS** 4.5 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture, 4.5 hours laboratory  
Ford ASSET course to include an in-depth study of electronic engine controls on modern automobiles. Emphasis on electronic engine control system theory of operation and repair to include discussion of sensors, processors and actuators, and system diagnosis and repair. On-board computer logic and strategies will also be presented. Preparation for ASE Certification. Students who successfully complete this course will receive Ford Motor Co. certification in Electronic Engine Control.

196 **ASSET – ELECTRICAL, ACCESSORIES AND AIR CONDITIONING** 5 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
4 hours lecture, 3 hours laboratory  
Ford ASSET course to include electrical systems, theory, diagnosis and repair procedures utilizing state of the art equipment. Systems covered will be storage, generating and starting. Coverage of accessory systems such as lighting, power seats, power door locks, cruise controls, electric windows, electronic dashboards, radios, windshield wipers, etc. Also covered are all major topics dealing with automotive air conditioning including refrigeration theory, system evacuation and recovery, leak repair, compressor repair, component replacement, and manual and automatic temperature control. Preparation for ASE Certification. Complemented by required work experience in the dealership.

197 **ASSET – WORK EXPERIENCE** 3 UNITS  
Prerequisite: Admission to the ASSET program  
Corequisite: None  
Recommended Preparation: None  
225 hours paid work experience  
Ford ASSET work experience. Students will be placed with sponsoring dealer at start of training program. Experience is based on paid work experience at the sponsoring dealership. Assessment of student is performed by the ASSET coordinator in discussion with appropriate dealership personnel. Student is expected to work in the area of emphasis that is concurrent with area of training that has most recently been completed at the college. Allows students to further develop skills attained in classroom setting. Must be repeated 5 times for a total of 15 units.

199 **SPECIAL STUDIES OR PROJECTS IN AUTOMOTIVE TECHNOLOGY** 1-3 UNITS  
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
3-9 hours  
Individual study, research or projects in the field of Automotive Technology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

200 **ASEP – ORIENTATION** 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
1 hour lecture  
Introduction to the General Motors sponsored ASEP program. Students will become familiar with dealer operations. Complemented by required work experience in a dealership.

201 **ASEP – ELECTRICAL** 6 UNITS  
Prerequisite: AUTO 200  
Corequisite: None  
Recommended Preparation: None  
4 hours lecture, 6 hours laboratory  
General Motors ASEP course to include electrical systems, theory, diagnosis and repair procedures utilizing state of the art equipment. Major topics include electrical laws, batteries, starting and charging systems, wiring diagrams, and introduction to computer controls. Coverage of accessory systems such as lighting, power seats, power door locks, cruise controls, electric windows, electronic dashboards, radios, windshield wipers, etc. Preparation for ASE and GM certification. Complemented by required work experience in a dealership.

202 **ASEP – BRAKES AND ALIGNMENT** 7 UNITS  
Prerequisite: AUTO 200  
Corequisite: None  
Recommended Preparation: None  
5 hours lecture, 6 hours laboratory  
General Motors ASEP course to include a detailed study of modern automotive braking systems and service procedures, including two and four wheel electronic anti-lock brake system operation and repair. Laboratory experience will cover drum and disc brake system inspection, adjustment and repair procedures. Also covers modern suspension and steering systems including electronic ride control, steering, and four wheel alignment principles as applied to checking and correcting alignment settings. Repair and replacement of suspension components. Additional training in wheel balancing. Emphasis on practical experience on “live” automobiles. Preparation for ASE and GM certification. Complemented by required work experience in a dealership.
203 ASEP – ENGINE REPAIR 4.5 UNITS
Prerequisite: AUTO 200
Corequisite: None
Recommended Preparation: None
3 hours lecture, 4.5 hours laboratory
General Motors ASEP course to include diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles, and assembly procedures in car repairs. Engine design theory will be discussed. Preparation for ASE and GM certification. Complemented by required work experience in a dealership.
CSU

204 ASEP – POWER TRAIN 7 UNITS
Prerequisite: AUTO 200
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory
General Motors ASEP course to include an in-depth study of hydraulic power transmission and control systems used in automatic transmissions, including diagnosis and overhaul of actual transmissions to precise industry standards. Plus, theory of operation, diagnosis, repair and overhaul of manual transmissions, clutches, drivelines and differentials including four wheel drive and front wheel drive. Preparation for ASE and GM certification. Complemented by required work experience in a dealership.
CSU

205 ASEP – ENGINE PERFORMANCE AND AIR CONDITIONING 7 UNITS
Prerequisite: AUTO 200
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory
General Motors ASEP course to include a detailed study of electronic engine controls on modern automobiles. Emphasis on electronic engine control system theory of operation and repair to include discussion of sensors, processors and actuators, and system diagnosis and repair. On-board computer logic and strategies will be presented. Also covers all major topics dealing with automotive air conditioning including refrigeration theory, system evacuation and recovery, leak repair, compressor repair, component replacement, and manual and automatic temperature control. Preparation for ASE and GM certification. Complemented by required work experience in a dealership.
CSU

206 ASEP – WORK EXPERIENCE 1-4 UNITS
Prerequisite: AUTO 200
Corequisite: None
Recommended Preparation: None
75 hours paid work experience per unit
General Motors ASEP work experience. Students will be placed with a sponsoring dealer at the start of the training program. This course is based on paid work experience at the sponsoring dealership. Assessment of student is performed by ASEP coordinator in discussion with appropriate dealership personnel. Student is expected to work in the area of emphasis that is concurrent with area of training that has most recently been completed at the college. Allows students to further develop skills attained in the classroom setting. Must be repeated for a total of 15 units.
CSU

298 SELECTED TOPICS IN AUTOMOTIVE TECHNOLOGY 1-7 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-21 hours
Selected topics in Automotive Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
CSU

299 SELECTED TOPICS IN AUTOMOTIVE TECHNOLOGY 1-7 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-21 hours
Selected topics in Automotive Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
CSU
112 CONTEMPORARY ISSUES IN ENVIRONMENTAL RESOURCES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of renewable and nonrenewable resources (water, air, energy, plants, animals) and their importance, inter-relationships and proper management if people and other organisms are to have an environment acceptable for survival.
UC, CSU, AA/AS GE, CSU GE

115 BIOLOGY OF ALCOHOL AND OTHER DRUGS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the biological principles underlying the effects of the major legal and illegal drugs on the human body. Survey of the commonly abused drugs with regard to their chemical nature, where and how they act and the factors that modify their effects.
CSU, AA/AS GE, CSU GE

122 PLANT STRUCTURES AND FUNCTIONS 4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Structural and functional aspects of plants with emphasis on seed producers and applications to horticulture. Includes fundamentals of plant biology, primary and secondary body plan, photosynthesis and respiration, growth and development, water relations and phloem transport, cellular and organismic reproduction, plant heredity and evolution.
CSU, AA/AS GE, CSU GE

126 INTRODUCTION TO BIOTECHNOLOGY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Comprehensive look at how the use of living organisms or their products can enhance our lives and impact society. Fundamentals of molecular biology and immunology, historical review of the developments leading to modern biotechnology, studies of the development and manufacturing of biotechnology products based on the isolation, analysis and manipulation of genes, and applications of the technological developments will be evaluated in their social, legal and ethical contexts
UC, AA/AS GE

130 GENERAL BIOLOGY I 3 UNITS
(CAN BIOL 2 = BIO 130+131)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Survey of basic biological principles with particular emphasis on the molecular and cellular aspects of the organism. The unifying concepts of biology such as organization, metabolism, genetics and evolution are discussed. Meets transfer requirements for non-majors.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

131 GENERAL BIOLOGY I LABORATORY 1 UNIT
(CAN BIOL 2 = BIO 130+131)
Prerequisite: BIO 130 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Laboratory experiments on the basic biological principles with particular emphasis on the molecular and cellular aspects of the organism. Meets transfer requirements for non-majors.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

141 HUMAN PHYSIOLOGY 3 UNITS
Prerequisite: BIO 130 and 131
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the function and interrelationships of the nervous, endocrine, muscular, circulatory, respiratory, digestive, exocrine and reproductive systems of the human body. Emphasizes the homeostatic nature of these systems with some reference to human disease states.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN BIOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Biology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisites/Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>210</td>
<td>BIOLOGY II</td>
<td>4</td>
<td>Study of the origin and nature of the different forms of life utilizing evolution as a unifying theme and presenting organismal diversity within a phylogenetic framework. The relationships of environment and lifestyles to form and function will be explored through examination of comparative structure and the physiology, nutrition, circulation, gas exchange, reproduction and development of organisms found in the three domains of life.</td>
<td>Prerequisite: None. Corequisite: None. Recommended Preparation: None. 3 hours lecture, 3 hours laboratory.</td>
</tr>
<tr>
<td>215</td>
<td>STATISTICS FOR LIFE SCIENCES</td>
<td>3</td>
<td>Methods and experience in defining and solving quantitative problems in the life sciences. Emphasis on the design of experiments and the application of a variety of parametric and nonparametric techniques to the analysis of data.</td>
<td>Prerequisite: MATH 110 or equivalent and BIO 130 or equivalent. Corequisite: None. Recommended Preparation: None. 2 hours lecture, 3 hours laboratory.</td>
</tr>
<tr>
<td>220</td>
<td>PRINCIPLES OF MOLECULAR, CELLULAR AND EVOLUTIONARY BIOLOGY</td>
<td>3</td>
<td>Study of the unifying principles of life manifested by cellular structures, functions and evolutionary history. Emphasis on the following topics: cellular processes including energy metabolism, membrane transport and cell division; classical and molecular genetics including recombinant DNA; communication between cells; population genetics and the mechanism of evolution; and the evolutionary basis of species classification. This course, along with BIO 210, is the recommended two-semester sequence for biology majors (BIO 210 is not a prerequisite for this course.).</td>
<td>Prerequisite: CHEM 141 or equivalent. Corequisite: BIO 221. Recommended Preparation: None. 3 hours lecture.</td>
</tr>
<tr>
<td>221</td>
<td>PRINCIPLES OF MOLECULAR, CELLULAR AND EVOLUTIONARY BIOLOGY LABORATORY</td>
<td>1</td>
<td>Investigates some of the general principles of biology presented in BIO 220, allowing students to observe examples of the phenomena using live materials where possible and providing the opportunity to apply concepts learned in BIO 220. Students conduct laboratory exercises which involve observations, demonstrations, experiments, data analyses, computer laboratory simulations and written reports.</td>
<td>Prerequisite: CHEM 141 or equivalent. Corequisite: BIO 220. Recommended Preparation: None. 3 hours laboratory.</td>
</tr>
<tr>
<td>298</td>
<td>SELECTED TOPICS IN BIOLOGY</td>
<td>1-4</td>
<td>Selected topics in Biology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
<td>Prerequisite: Varies with topic. Corequisite: Varies with topic. Recommended Preparation: Varies with topic. 1-12 hours.</td>
</tr>
<tr>
<td>299</td>
<td>SELECTED TOPICS IN BIOLOGY</td>
<td>1-4</td>
<td>Selected topics in Biology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.</td>
<td>Prerequisite: Varies with topic. Corequisite: Varies with topic. Recommended Preparation: Varies with topic. 1-12 hours.</td>
</tr>
</tbody>
</table>
105 CALL CENTER SYSTEMS AND PROCEDURES 2 UNITS
(formerly BOT 111)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 1 hour laboratory
Introduces students to general customer service procedures along with the basic skills required to become employed as a Call Center Representative. In addition, students will practice typing at least 25 wpm with 90% accuracy. Topics include telephone procedures, greeting customers, handling difficult customers, effective communication, finding solutions and time management, and formatting basic business documents using Microsoft Word. Utilizes computer simulation software to replicate a customer service environment. Includes attendance guidelines, basic email skills and etiquette. Students will also learn elementary database skills using Microsoft Access.

106 PROVIDING QUALITY SERVICE 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture
Provides an overview of the major components of providing quality client service in government, business and non-profit sectors. Topics include developing client profiles, setting quality service objectives and acquiring a customer service perspective. Case studies and role playing situations will be experienced.

109 ELEMENTARY ACCOUNTING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
One-semester introduction to elementary accounting principles. Includes journals, ledgers, worksheets and financial statements for the single proprietorship. Designed for the clerical employee or for those who do not intend further study of accounting. (May not be substituted for BUS 120, where required. Not open to students with credit in BUS 120.)
CSU

110 INTRODUCTION TO BUSINESS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Provides a comprehensive view of today’s dynamic American business and the global economy. Topics include starting a small business, satisfying customers, managing operations, motivating employees and building self-managed teams, developing and implementing customer-oriented marketing plans, managing information, managing financial resources, and exploring ethical and social responsibilities of American business.
CSU

111 ENTREPRENEURSHIP: STARTING AND DEVELOPING A BUSINESS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to provide the prospective small business manager with the most up-to-date skills necessary in the planning function of opening one’s own business. Emphasis on sources of financing, site locations, legal problems, marketing surveys, organizational structure and self-analysis to determine one’s personal readiness for entrepreneurship.
CSU

112 ENTREPRENEURSHIP: SUCCESSFUL MARKETING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to provide the small business owner with the necessary skills to market a product or service. Examines the essential elements of a marketing strategy, the four P’s: Product, Place (Distribution), Price and Promotion. Also examines the relationship between sales and marketing and how they function together in the small business environment.
CSU

114 EFFECTIVE JOB SEARCH 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Provides comprehensive and valuable skills that are needed to successfully secure employment. Designed to examine the continuous process of career/life planning through effective, well-planned and efficiently organized job search procedures.
CSU

115 HUMAN RELATIONS IN BUSINESS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Covers the human aspects of the organization and the role of the individual within the organization. Emphasis on the role of the individual in the formal and informal structure of the organization, leadership and group dynamics, motivation, job enrichment, organizational change and communications—both verbal and nonverbal—within the organization.
CSU
119 ENtrepreneurship: Financing And Writing A Business Plan 3 Units
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to provide prospective small business owners or managers with the knowledge required to write a business plan and to understand and control the cash management function of their business. Emphasis on the types of financing, understanding debt vs. equity financing, cash flow analysis, borrowing and investment, forecasting and budgeting.

CSU

120 Financial Accounting 4 Units
(CAN BUS SEQ A = BUS 120+121)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
4 hours lecture
Introduces students to the accounting function and how it is used within our economic society. Views accounting as an information-generating system that communicates financial data to support end users in their economic decision-making. Includes the theory and concepts of accounting, as well as their application to the recording of financial information for the three types of business organizations: sole proprietorship, partnership and corporation. Emphasis on the corporate form of organization.

UC credit limit, CSU

121 Managerial Accounting 4 Units
(CAN BUS 4; CAN BUS SEQ A = BUS 120+121)
Prerequisite: BUS 120 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
4 hours lecture
Introduces students to the concepts, methods and procedures for the development and use of accounting information to support and assist management in their internal cost accounting processes and financial decision-making. Includes the theory and concepts of cost accounting, use of financial and accounting information for planning, budgeting and control of operations, and methods and analysis to assist managerial accountants in decision-making activities.

UC credit limit, CSU

122 Intermediate Accounting 4 Units
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
4 hours lecture
In-depth study of accounting theories and principles underlying financial statements and the determination of net income. Survey of basic accounting principles. Study of corporate balance sheet items and the analytical processes of statement preparation which include funds-flow and cash-flow reporting.

UC credit limit, CSU

124 Auditing 3 Units
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the role of the auditor in the American economy including the general principles and concepts of auditing duties, ethics, liability and responsibilities of the auditor, and procedures for verification of financial statements including EDP statements.

CSU

125 Business Law: Legal Environment of Business 3 Units
(CAN BUS 12)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Legal environment of business, sources of law, constitutional bases of regulation, social and ethical influences, corporate responsibility, judicial and administrative systems, contracts, torts, agency, business organizations, bankruptcy, securities regulation, regulation of property and protection of intellectual property interests, consumer protection, regulation of business to prevent market failures.

UC, CSU

128 Business Communication 3 Units
Prerequisite: ENGL 111 or ESL 106
Corequisite: None
Recommended Preparation: None
3 hours lecture
Development of the ability to analyze, organize, and compose various types of written and oral business communications with emphasis on the writing of clear, concise and persuasive letters, memos, and reports. Note: All assignments must be typed.

CSU

129 Payroll Accounting and Business Taxes 2 Units
Prerequisite: BUS 120
Corequisite: None
Recommended Preparation: None
2 hours lecture
Provides students with an in-depth understanding of payroll accounting. Includes calculations of gross to net pay, coverage of federal and state withholdings and deductions, recording of payroll transactions into the accounting records, and filing of federal and state payroll tax forms. Also includes consideration of factors which determine employee versus independent contractor status, and coverage of business taxes such as sales and property taxes and their filing requirements.

CSU
141 ENTREPRENEURSHIP: MANAGING A NEW BUSINESS  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to help students apply theories of marketing, management, personnel, finance and production to problems encountered daily in managing a business. Focuses on practical solutions to common business management problems.
CSU

146 MARKETING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Focuses on the function of marketing in an organization. Examines the essential elements of a marketing strategy: product, promotion, distribution, price, the effect of the business environment on marketing decisions, consumer behavior, identification of markets and current issues in marketing.
CSU

150 INDIVIDUAL INCOME TAX ACCOUNTING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduces students to federal taxation and focuses on tax preparation as applied to the individual taxpayer. Includes an overview of the income tax environment. Topics include filing status, personal and dependency exemption, itemized and standard deductions, and solving specific problems related to the filing of the Federal Form 1040.
CSU

151 CORPORATE INCOME TAX ACCOUNTING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduces students to federal taxation and focuses on tax law as applied to the non-individual tax entity. Includes an overview of the income tax environment. Topics include corporations, regular and “S,” partnerships, estate and trust taxation, non-profit organization and family tax planning, and solving problems related to the filing of Federal Forms 1120, 1120S, 1065, 1041, 709, 706.
CSU

154 DIVERSITY IN THE WORKPLACE  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Teaches students about the historical perspective of diversity in the workplace; motivates them in defining and developing a manager’s responsibilities as it relates to diversity in the workplace; explores and sensitizes students to the unique problems of diversity in the workplace; and assists them in developing effective solutions to problems.
CSU

155 HUMAN RESOURCES MANAGEMENT  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the management of human resources and an understanding of the impact and accountability to the organization of human resource activities. Global human resource strategies; social and organizational realities; legal implications affecting people at work; union/non-union practices; employee rights; safety issues.
CSU

156 PRINCIPLES OF MANAGEMENT  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Planning, organizing, directing and controlling for management. Interaction of the functions includes setting objectives, MBO, decision-making tools, alternative organization structures, leadership, motivation, communication, group dynamics, management of stress and change, time management and women in management. Survey of the quantitative tools available to the manager.
CSU

157 PRINCIPLES OF LEADERSHIP  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Develops insight into the multiplicity of roles and responsibilities which the leader must fulfill, focusing on personal, work and social environments. Deals with leadership as a function of selecting, motivating and directing others toward an agreed upon goal.
CSU
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>159</td>
<td>MANAGEMENT INTERNSHIP</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>225 hours paid or 180 hours unpaid work experience. Field work in management. Students will be required to maintain a diary of their weekly activities and submit a comprehensive report of their observations upon completion. Students will meet at least once during the semester to compare field experiences and submit paperwork.</td>
</tr>
<tr>
<td>162</td>
<td>ANALYSIS OF FINANCIAL STATEMENTS</td>
<td>3</td>
<td>BUS 120</td>
<td>None</td>
<td>None</td>
<td>Designed to explore the characteristics of financial statements, to analyze the reported results, and to place the findings from such an analysis in proper perspective. Students will learn how to apply ratios to financial statements, and to interpret their outcomes in order to draw various inferences and/or conclusions from their results.</td>
</tr>
<tr>
<td>176</td>
<td>COMPUTERIZED ACCOUNTING APPLICATIONS</td>
<td>2</td>
<td>BUS 120</td>
<td>None</td>
<td>None</td>
<td>Beginning course consisting of hands-on use of accounting software packages used on microcomputers. Especially beneficial to students, teachers and professionals who are using, or plan to use, microcomputers in a business environment.</td>
</tr>
<tr>
<td>195</td>
<td>FAMILY INCOME MANAGEMENT</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Management of personal income and expenditures for the individual and the family throughout the life cycle, through awareness of values, goals and the decision-making process. Advertising, consumer protection, purchasing skills and consumer laws will be covered as they apply to use of credit, housing, risk protection, health care, food, clothing and transportation. Money management and financial planning will include budgeting, institutional savings and checking services, investments, taxes and estate planning. The impact of inflation, business cycle and other current issues will be included.</td>
</tr>
<tr>
<td>199</td>
<td>SPECIAL STUDIES OR PROJECTS IN BUSINESS</td>
<td>1-3</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Individual study, research or projects in the field of Business under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.</td>
</tr>
<tr>
<td>298</td>
<td>SELECTED TOPICS IN BUSINESS</td>
<td>1-4</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Selected topics in Business not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
</tr>
<tr>
<td>299</td>
<td>SELECTED TOPICS IN BUSINESS</td>
<td>1-4</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Selected topics in Business not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.</td>
</tr>
</tbody>
</table>
BUSINESS OFFICE TECHNOLOGY

095 KEYBOARDING SKILL REINFORCEMENT 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Designed for students who have completed BOT 100 and want to reinforce their skills before advancing to the next level of keyboarding. Begins with a keyboard review, then progresses to practice and timings designed to improve keyboarding speed and accuracy. Offered as Credit/No Credit only.

096 COMPUTER BASICS FOR THE OFFICE 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: BOT 100 or equivalent and assessment recommendation for ESL 106
.5 hour lecture, 1.5 hours laboratory
Designed to give students with little or no computer experience the basic information and skills needed to operate a computer efficiently in an office environment. Includes an overview of components of a computer system hardware and software, proficiency in using a mouse, storing information, using the Internet, and purchasing and maintaining a computer. Recommended that students complete a basic keyboarding course prior to enrolling in this course. Offered as Credit/No Credit only.

097 WINDOWS BASICS FOR THE OFFICE 1 UNIT
Prerequisite: BOT 096 or equivalent with a grade of ‘C’ or ‘CR’ or better or concurrent enrollment
Corequisite: None
Recommended Preparation: BOT 100 or equivalent and assessment recommendation for ESL 106
.5 hour lecture, 1.5 hours laboratory
Designed for students with little or no computer experience. Students will learn to use the Windows operating system efficiently to create and manage files and folders. Offered as Credit/No Credit only.

100 BASIC KEYBOARDING 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Beginning keyboarding techniques for students who wish to use keyboarding skills for inputting information on computers. Taught on computers using appropriate software. Emphasis on the development of speed and accuracy by use of touch keyboarding methods, development of touch skills on the 10-key pad, understanding of basic vocabulary and concepts used in keyboarding operations for inputting and retrieving information, and composition at the keyboard. For students with physical disabilities that may impair proficiency, emphasis will be on the quality of output instead of speed, and on the use of alternative input devices.

101A KEYBOARDING/DOCUMENT PROCESSING 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: BOT 100 with a grade of ‘C’ or ‘CR’ or better or equivalent
1 hour lecture, 1.5 hours laboratory
Equivalent to the first half of BOT 101. Focuses on learning or reviewing the alphabetic and numeric keyboard including the 10-key pad for numeric data entry. Students will learn basic features of Microsoft Word to produce simple memos, letters and reports. Keyboarding software will be used to build speed and accuracy. Students wishing to progress to BOT 102 should also complete BOT 101B. Not open to students with credit in BOT 101 or BUS 101 offered at Grossmont College.

101B KEYBOARDING/DOCUMENT PROCESSING 1.5 UNITS
Prerequisite: BOT 101A with a grade of ‘C’ or ‘CR’ or better or equivalent
Corequisite: None
Recommended Preparation: ESL 106 or equivalent reading level
.5 hour lecture, 3 hours laboratory
Equivalent to the second half of BOT 101. Students will use Microsoft Word to produce correctly formatted and accurate business documents including letters, reports and tables. Students will also use keyboarding software to build speed and accuracy. Not open to students with credit in BOT 101 or BUS 101 offered at Grossmont College.

102 INTERMEDIATE KEYBOARDING/DOCUMENT PROCESSING 3 UNITS
Prerequisite: BOT 101AB with a grade of ‘C’ or ‘CR’ or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours lecture, 4.5 hours laboratory
Continuation course in keyboarding for students who want to increase their keyboarding skill. Students will continue to use Microsoft Word to produce correctly formatted documents. Begins with intermediate MS Word functions, therefore students entering this course should be proficient in using basic Word features and be able to key a minimum of 30 net words per minute on a 5-minute timed writing.

103A BUILDING KEYBOARDING SKILL I .5 UNIT
Prerequisite: BOT 100 with a grade of ‘C’ or ‘CR’ or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Designed for students who have completed a keyboarding course but wish to work further on developing speed and accuracy. Students should know the alphabetic keyboard by touch and key at a minimum rate of 20 net words per minute on a 5-minute timed writing. Students keying at a lower rate should enroll in BOT 095.
103B BUILDING KEYBOARDING SKILL II .5 UNIT
Prerequisite: BOT 103A or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Continuation course in building keyboarding speed and accuracy. Students should be keying by touch at a minimum rate of 30 net words per minute on a 5-minute timed writing. Students keying at a lower rate should enroll in BOT 103A.

103C BUILDING KEYBOARDING SKILL III .5 UNIT
Prerequisite: BOT 103B or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Continuation course in building keyboarding speed and accuracy. Entering students should be keying by touch at a minimum rate of 40 net words per minute on a 5-minute timed writing. Students keying at a lower rate should enroll in BOT 103B.

104 FILING AND RECORDS MANAGEMENT 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ESL 103 with a grade of "C" or "CR" or better or assessment recommendation for ESL 106
.5 hour lecture, 1.5 hours laboratory
Instruction in the Association of Records Managers and Administrators (ARMA) filing rules and techniques which are widely used in business to create and maintain files. Alphabetic, numeric, geographic and subject filing rules are included. Also includes instruction in records management including rules for retention, transfer and disposition of records. Students use a microcomputer software package to learn basic filing rules.

105 DATA ENTRY SKILLS 1 UNIT
Prerequisite: BOT 100 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: BOT 096
.5 hour lecture, 1.5 hours laboratory
Designed for students who wish to prepare for employment in the data entry field. Emphasis on development of speed and accuracy in the use of the microcomputer alphabetic keyboard and numeric keypad to reach employable levels of skill. Students will complete assignments, drills, and timed speed and accuracy tests.

107 OFFICE SYSTEMS AND PROCEDURES 2 UNITS
Prerequisite: BOT 096, 097, 101AB with a grade of "C" or "CR" or better or concurrent enrollment or equivalent
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106
2 hours lecture
Includes office ethics and professionalism; prioritizing and productivity; human relations; working in teams; customer service skills; telephone skills; scheduling appointments; using email, copiers, fax machines and scanners; handling office mail; and using the Internet for common office functions such as travel reservations and ordering supplies.

108 USING CALCULATORS TO SOLVE BUSINESS PROBLEMS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106
.5 hour lecture, 1.5 hours laboratory
Introduces the 10-key, digital display electronic calculator. Students will build skill in performing fundamental arithmetic operations using a calculator. Topics include use of decimals, fractions, constants, discounts, percentages and memory keys.

114 ESSENTIAL WORD 1 UNIT
Prerequisite: BOT 101AB or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106 and completion of BOT 096 and 097 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
Designed for students who want to learn the most commonly used features of a current popular word processing software package. Upon completion, students will be proficient in using text editing and formatting commands to produce typical business documents, and in using the mail merge feature to produce form letters, labels and envelopes. Students who wish to study word processing software in more depth should consider enrolling in BOT 120, 121, 122. (Specific software versions to be identified in class schedule.) Not open to students with credit in BOT 121 or 122.

115 ESSENTIAL EXCEL 1 UNIT
Prerequisite: BOT 100 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106 and completion of BOT 096 and 097 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
Designed for students who want to become proficient in the most commonly used features of Microsoft Excel. Basic spreadsheet concepts and terms will be introduced. Students will learn how to create, format and revise spreadsheets and charts, and to create basic formulas and templates. The use of simple macros will be introduced. Students who desire more in-depth coverage of these and additional topics should consider enrolling in BOT 123, 124, 125. Not open to students with credit in BOT 124 or 125.
116 ESSENTIAL ACCESS 1 UNIT
Prerequisite: BOT 100 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106 and completion of BOT 096 and 097 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
Designed for students who want to become proficient in the most commonly used features of Microsoft Access. Basic database concepts and terms will be introduced. Students will learn how to create, format, edit and revise simple databases, to sort and filter records, to use queries, and to create forms, reports and labels. Students who desire more in-depth coverage of these and additional topics should consider enrolling in CIS 140ABCD or BOT 126, 127, 128. Not open to students with credit in BOT 127 or 128.

117 ESSENTIAL POWERPOINT 1 UNIT
Prerequisite: BOT 114 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106 and completion of BOT 096 and 097 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
Designed for students who want to become proficient in the most commonly used features of Microsoft PowerPoint. Basic concepts and terms will be introduced. Students will learn how to create, format, edit and revise PowerPoint presentations, including animation effects. Students who desire more in-depth coverage of these and additional topics should consider enrolling in BOT 129, 130, 131. Not open to students with credit in BOT 129 or 131.

118 INTEGRATED OFFICE PROJECTS 1 UNIT
Prerequisite: BOT 102, 107, 115, 116, 117 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106
3 hours laboratory
Capstone course designed for BOT majors who have completed prerequisite courses in all applications of the Microsoft Office suite (Word, Excel, Access, PowerPoint) and have keyboarding skills of a minimum 40 net words per minute. Students will apply their skills to complete projects that integrate these applications. Students will also use the Internet to complete projects.

120 COMPREHENSIVE WORD, LEVEL I 1 UNIT
Prerequisite: BOT 101AB or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106 and completion of BOT 096 and 097 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
First level of a three-level course sequence designed to give students thorough coverage of most features of Microsoft Word. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students wishing less comprehensive coverage of MS Word should consider enrolling in BOT 114.

121 COMPREHENSIVE WORD, LEVEL II 1 UNIT
Prerequisite: BOT 120 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Second level of a three-level course sequence designed to give students thorough coverage of most features of Microsoft Word. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.

122 COMPREHENSIVE WORD, LEVEL III 1 UNIT
Prerequisite: BOT 121 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third level of a three-level course sequence designed to give students thorough coverage of most features of Microsoft Word. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 280 prior to taking the examination.

123 COMPREHENSIVE EXCEL, LEVEL I 1 UNIT
Prerequisite: BOT 100 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: BOT 096, 097 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
First level of a three-level course sequence designed to give students thorough coverage of most features of Microsoft Excel. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students wishing less comprehensive coverage of MS Excel should consider enrolling in BOT 115.
124 COMPREHENSIVE EXCEL, LEVEL II 1 UNIT
Prerequisite: BOT 123 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Second level of a three-level course sequence designed to give students thorough coverage of features of Microsoft Excel. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.

125 COMPREHENSIVE EXCEL, LEVEL III 1 UNIT
Prerequisite: BOT 124 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third level of a three-level course sequence designed to give students thorough knowledge of features of Microsoft Excel. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 281 prior to taking the examination.

126 COMPREHENSIVE ACCESS, LEVEL I 1 UNIT
Prerequisite: BOT 100 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106 and completion of BOT 096, 097 and 116 or equivalent with a grade of "C" or "CR" or better
.5 hour lecture, 1.5 hours laboratory
First level of a three-level course sequence designed to give students thorough coverage of features of Microsoft Access. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students wishing less comprehensive coverage of MS Access should consider enrolling in BOT 116.

127 COMPREHENSIVE ACCESS, LEVEL II 1 UNIT
Prerequisite: BOT 126 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Second level of a three-level course sequence designed to give students thorough knowledge of features of Microsoft Access. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.

128 COMPREHENSIVE ACCESS, LEVEL III 1 UNIT
Prerequisite: BOT 127 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third level of a three-level course sequence designed to give students thorough knowledge of most features of Microsoft Access. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 282 prior to taking the examination.

129 COMPREHENSIVE POWERPOINT, LEVEL I 1 UNIT
Prerequisite: BOT 114 or 120 or equivalent and BOT 101AB or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: Assessment recommendation for ESL 106
.5 hour lecture, 1.5 hours laboratory
First level of a three-level course sequence designed to give students thorough coverage of most features of Microsoft PowerPoint. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students wishing less comprehensive coverage of MS PowerPoint should consider enrolling in BOT 117.

130 COMPREHENSIVE POWERPOINT, LEVEL II 1 UNIT
Prerequisite: BOT 129 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Second level of a three-level course sequence designed to give students thorough coverage of most features in Microsoft PowerPoint. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.

131 COMPREHENSIVE POWERPOINT, LEVEL III 1 UNIT
Prerequisite: BOT 130 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third level of a three-level course sequence designed to give students thorough coverage of most features in Microsoft PowerPoint. Students who complete this level will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 283 prior to taking the examination.
150 USING MICROSOFT PUBLISHER 1 UNIT
Prerequisite: BOT 101AB or equivalent with a grade of "C" or "CR" or better and BOT 114 or 120 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Introductory course in Microsoft Publisher for those students who wish to acquire a basic understanding of concepts and terminology for the production and design of professional quality publications. Emphasis on graphics, word processing and page layout.

151 USING MICROSOFT OUTLOOK 1 UNIT
Prerequisite: BOT 101AB or equivalent with a grade of "C" or "CR" or better and BOT 114 or 120 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Designed to offer students proficiency in the use of Microsoft Outlook to create email messages, maintain personal calendars and schedules, plan work, maintain contact lists, and organize information.

199 SPECIAL STUDIES OR PROJECTS IN BUSINESS OFFICE TECHNOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Business Office Technology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

201 ADVANCED KEYBOARDING/DOCUMENT PROCESSING 3 UNITS
Prerequisite: BOT 102 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours lecture, 4.5 hours laboratory
Advanced keyboarding for further development of keyboarding skills to meet professional placement requirements. Students will apply intermediate and advanced features of Microsoft Word to create complex business documents with minimum instruction. Students will use computer software for building speed and accuracy on 5-minute timed writings to attain the speed and accuracy required for professional office positions.

203 OFFICE PROJECT COORDINATION 1 UNIT
Prerequisite: BOT 122, 125, 128, 131 and 151 or equivalent with a grade of "C" or "CR" or better
Corequisite: None
Recommended Preparation: None
3 hours laboratory
This capstone course gives students who have comprehensive knowledge of Microsoft Word, Excel, Access, PowerPoint and Outlook the opportunity to integrate those skills by assuming responsibility for completing a given project from inception to completion.

223 OFFICE WORK EXPERIENCE 1 UNIT
Prerequisite: Limited to BOT majors who have completed at least 12 units in the major
Corequisite: None
Recommended Preparation: Keyboarding and computer skills as well as training in a variety of office procedures as required by most worksites
5 hours work experience
Work experience in an office setting. Trainee spends 60-75 hours per semester in on-the-job training.

224 OFFICE WORK EXPERIENCE 2 UNITS
Prerequisite: Limited to BOT majors who have completed at least 12 units in the major
Corequisite: None
Recommended Preparation: Keyboarding and computer skills as well as training in a variety of office procedures as required by most worksites
10 hours work experience
Work experience in an office setting. Trainee spends 120-150 hours per semester in on-the-job training.

225 OFFICE WORK EXPERIENCE 3 UNITS
Prerequisite: Limited to BOT majors who have completed at least 12 units in the major
Corequisite: None
Recommended Preparation: Keyboarding and computer skills as well as training in a variety of office procedures as required by most worksites
15 hours work experience
Work experience in an office setting. Trainee spends 180-225 hours per semester in on-the-job training.

280 PREPARING FOR PERFORMANCE ABC EXAMINATIONS IN MICROSOFT WORD .5 UNIT
Prerequisite: BOT 122 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Designed for students who have completed BOT 122 or the equivalent. Students will use testing software to prepare for the Microsoft Office User Specialist (MOUS) certification examination to prepare for employment examinations or to receive a BOT certificate of proficiency in MS Word with detailed competencies. May be repeated up to 3 times.
Offered as Credit/No Credit only.
281 PREPARING FOR PERFORMANCE
ABC EXAMINATIONS IN MICROSOFT EXCEL .5 UNIT
Prerequisite: BOT 125 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Designed for students who have completed BOT 125 or the equivalent. Students will use testing software to prepare for the Microsoft Office User Specialist (MOUS) certification examination to prepare for employment examinations or to receive a BOT certificate of proficiency in MS Excel with detailed competencies. May be repeated up to 3 times. Offered as Credit/No Credit only.

282 PREPARING FOR PERFORMANCE
ABC EXAMINATIONS IN MICROSOFT ACCESS .5 UNIT
Prerequisite: BOT 128 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Designed for students who have completed BOT 128 or the equivalent. Students will use testing software to prepare for the Microsoft Office User Specialist (MOUS) certification examination to prepare for employment examinations or to receive a BOT certificate of proficiency in MS Access with detailed competencies. May be repeated up to 3 times. Offered as Credit/No Credit only.

283 PREPARING FOR PERFORMANCE
ABC EXAMINATIONS IN MICROSOFT POWERPOINT .5 UNIT
Prerequisite: BOT 131 with a grade of "C" or "CR" or better or equivalent
Corequisite: None
Recommended Preparation: None
1.5 hours laboratory
Designed for students who have completed BOT 131 or the equivalent. Students will use testing software to prepare for the Microsoft Office User Specialist (MOUS) certification examination to prepare for employment examinations or to receive a BOT certificate of proficiency in MS PowerPoint with detailed competencies. May be repeated up to 3 times. Offered as Credit/No Credit only.

298 SELECTED TOPICS IN BUSINESS OFFICE TECHNOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Business Office Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
115 FUNDAMENTALS OF CHEMISTRY 4 UNITS
(CAN CHEM 6)
Prerequisite: MATH 090 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Elementary principles of inorganic and general chemistry with a brief introduction to organic and biochemistry. Previous chemistry background is not required. Recommended for students who need only a one-semester general chemistry course and for students entering paramedical and allied health fields.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

141 GENERAL CHEMISTRY I 5 UNITS
(CAN CHEM 2; CAN CHEM SEQ A = CHEM 141+142)
Prerequisite: One year of high school chemistry or CHEM 115 and MATH 110 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Basic principles and calculations of chemistry with emphasis in the areas of atomic structure, chemical bonding, molecular structure and properties; acids, bases and salts; equilibrium; thermodynamics; oxidation-reduction and kinetics. The laboratory is an introduction to quantitative analysis and the study of atomic and molecular structures.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

142 GENERAL CHEMISTRY II 5 UNITS
(CAN CHEM 4; CAN CHEM SEQ A = CHEM 141+142)
Prerequisite: CHEM 141 (grade of “C” or better recommended)
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Basic principles and calculations of chemistry with emphasis in the areas of equilibrium, thermodynamics, descriptive chemistry of the periodic table, coordination compounds, radiochemistry and an introduction to organic chemistry. The laboratory will continue on the same basis as CHEM 141, but will also include some qualitative analysis.
UC, CSU, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN CHEMISTRY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Chemistry under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

231 ORGANIC CHEMISTRY I 5 UNITS
Prerequisite: CHEM 142
Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Synthesis and reactions of carbon compounds, primarily aliphatic compounds. The relationship of structure to properties, reactivity and mechanism of reaction will be emphasized. This course, which is equivalent to the first semester of a two-semester sequence offered at four-year institutions, is intended for biology, chemistry and pre-medical majors needing either one or two semesters of organic chemistry.
UC, CSU, IGETC, CSU GE

298 SELECTED TOPICS IN CHEMISTRY 1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in Chemistry not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN CHEMISTRY 1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in Chemistry not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
123 INTRODUCTION TO PROGRAMS AND CURRICULUM FOR YOUNG CHILDREN 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Overview of the field of child development. Covers developmentally appropriate curriculum practices, regulations, classroom environment and management techniques for a variety of early childhood programs. Students will explore career options and their aptitude for this profession. Students are required to observe and report on different types of programs in the community.
CSU

124 INFANT AND TODDLER DEVELOPMENT 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the process of human development from conception to 36 months as determined by heredity, society and human interaction with implications for child guidance. Prenatal development and the birth process are emphasized. Observations of a neonate, infant and toddler are required.
CSU

125 CHILD GROWTH AND DEVELOPMENT 3 UNITS
(CAN FCS 14)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the process of human development from conception through adolescence as determined by heredity, society and personal human interaction with implications for child guidance. Observation of children of various ages is an integral part of this course.
CSU, AA/AS GE, CSU GE, IGETC, UC

126 ART FOR CHILD DEVELOPMENT 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Exploration of the importance and value of creative art activities for young children. Experiences with a variety of art media; evaluation and selection of materials appropriate for toddlers, preschool children and children with special needs.
CSU

127 SCIENCE AND MATHEMATICS FOR CHILD DEVELOPMENT 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 125
3 hours lecture
Exploration of the importance and value of science and mathematics in programs for young children. Understanding and devising ways of teaching basic concepts, evaluating activities and constructing appropriate materials for young children and children with special needs. Use of computers with children is included.
CSU

128 MUSIC AND MOVEMENT FOR CHILD DEVELOPMENT 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Exploration of the importance and meaning of music and movement for toddlers, preschool children and children with special needs. Areas emphasized will be listening skills, singing, movement education, creating instruments.
CSU

129 LANGUAGE AND LITERATURE FOR CHILD DEVELOPMENT 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 125
3 hours lecture
Designed to help teachers build language opportunities into every curriculum area, to explore methods of fostering language and emerging literacy skills for young children and children with special needs. Includes the study of children’s literature, standards for evaluating books and computer software, techniques of storytelling and puppetry.
CSU

130 CURRICULUM: DEVELOPMENTALLY APPROPRIATE PRACTICES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 123, 125, 126, 127, 128, 129 and 131
3 hours lecture
Advanced course in developmentally appropriate curriculum practices for early childhood programs. Looks at contemporary philosophies and current best practices in curriculum activities, methods and materials appropriate for planning a program for young children.
CSU
131 CHILD, FAMILY AND COMMUNITY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 123 and 125 with a grade of "C" or better
3 hours lecture
Study of the influence of different variables impacting the child and family dynamic. Emphasis on establishing effective teacher, caregiver and family relationships. Community resources and agencies that strengthen families will be examined. Students will have the opportunity to develop strategies to support the wide range of families in a multicultural society. Required by the California State Department of Social Services for teachers and directors.

CSU

132 OBSERVATION AND GUIDANCE FOR CHILD DEVELOPMENT 2 UNITS
Prerequisite: Completion of the following with a grade of "C" or better: CD 123, 125, 126, 127, 128, 129, 131 and 130 or 143
Corequisite: CD 133
Recommended Preparation: None
2 hours lecture
Student formulation and application of child guidance techniques based on observation and experiences at the school in which the student is doing his/her field work experience.

CSU

133 FIELD EXPERIENCE FOR CHILD DEVELOPMENT 2 UNITS
Prerequisite: Completion of the following with a grade of "C" or better: CD 123, 125, 126, 127, 128, 129, 130 and 131
Corequisite: CD 132 or previous enrollment
Recommended Preparation: None
10 hours paid or 8 hours unpaid work experience per week
Under supervision at approved field placement sites, students will participate in all classroom activities. Students will develop and supervise learning experiences, conduct group-times, handle routines and respond to individual and group needs of young children.

CSU

134 HEALTH AND SAFETY FOR TEACHERS OF YOUNG CHILDREN 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
For teachers, directors and aides working in an educational or child care setting as well as parents or others who desire current information and concepts of health and safety as it applies to children, infancy through school age. Covers laws, practices and curriculum regarding first aid, accident prevention and childhood illness. Helps adults to assist young children to develop good habits, attitudes and responses that lead to healthy lifestyles. Exceeds the Health and Safety Training requirements for child care providers.

CSU

135 PARENT-CHILD INTERACTION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
For teachers, parent educators and parents which offers skills and resources that promote more effective parent-child interaction. The parent-child relationship throughout the life cycle will be emphasized. Issues include sex education, divorce, single parenting, aging and death.

CSU

136 ADULT SUPERVISION: THE MASTER TEACHER'S ROLE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: 12 units of CD as defined by Title 22 licensing regulations: 3 units in Child Growth Development (CD 125), 3 units in Child, Family and Community (CD 131), 6 units in Program Curriculum (CD 123 or 126 or 127 or 128 or 129 or 130), and currently teaching in a preschool or child care setting in the role of lead teacher or head teacher or other supervisory capacity.
3 hours lecture
Principles and practical techniques for working with and fostering the professional development of co-teachers, aides, parents, student teachers and volunteers in preschool and child care programs. Emphasis on the role of the classroom teacher or director who functions as master teacher, lead teacher and/or mentor to adults while simultaneously addressing the needs of children, families and the program. Students will have opportunities to develop skills in delegation as well as adult problem solving and communication.

CSU

137 ADMINISTRATION OF CHILD DEVELOPMENT PROGRAMS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 123, 125, 131 and 126 or 127, 128 or 129 or 130
3 hours lecture
Administrative skills, knowledge and techniques needed to organize and operate a child development facility. Emphasis on budget, management, regulatory laws, development of school policies and procedures. Required by the California State Department of Social Services for directors and head teachers.

CSU

138 ADMINISTRATION OF CHILD DEVELOPMENT PROGRAMS II 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 137
3 hours lecture
Provides an advanced level of administrative and managerial knowledge needed to operate a child care center as a successful business. Emphasis on analysis and application of business theory and principles in the areas of budget, personnel, environmental design, program, and business communication.

CSU
139 INFANT/PARENT DEVELOPMENT 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 hours lecture, 1.5 hours laboratory
Lecture and discussion group to support parents as growing adults while helping them to understand and appreciate principles of infant and toddler development. Enrolled parents will bring their infants to each three-hour class meeting for interaction and observation by child development students.
CSU

141 WORKING WITH CHILDREN WITH SPECIAL NEEDS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Focuses on strategies for working with children with special needs, including physical challenges, learning difficulties, prenatal exposure to drugs, limited English skills, giftedness and behavior disorders. With an emphasis on inclusion in the regular classroom and childcare settings, the class will include compliance with legislation, referral processes, working with families, and modification of environment and curriculum.
CSU

143 INFANT/TODDLER CURRICULUM 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 124 or 125
3 hours lecture
Prepares students to develop an infant and/or toddler curriculum including design of a developmentally appropriate learning environment. Examination of the philosophies and methods currently in practice. Teacher competencies necessary for work with children in these stages will be emphasized.
CSU

145 CHILD ABUSE: DETECTION, INTERVENTION AND PREVENTION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Physical abuse and neglect, emotional abuse and neglect, and sexual abuse of children will be examined with an emphasis on how the classroom teacher, foster parents and members of the general public can prevent, detect and intervene in cases of child abuse.
CSU

148 CURRICULUM FOR SCHOOL AGE CHILD CARE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 125
3 hours lecture
Covers the developmental needs, appropriate curriculum and guidance techniques for children ages 6 to 12 in a child care setting. Meets Title 22 curriculum requirements for teachers and directors in extended day care programs. Also useful for recreation and youth group activities.
CSU

149 SCHOOL AGE CHILD CARE PROGRAM PLANNING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CD 148
3 hours lecture
Continuation and expansion of principles introduced in CD 148 with a focus on overall program design for school age child care. Special emphasis on working with children labeled "at risk" and parent communication.
CSU

150 FIELD EXPERIENCE FOR SCHOOL AGE CHILD CARE 2 UNITS
Prerequisite: CD 125, 131, 134, 148, 149
Corequisite: CD 132 or previous enrollment
Recommended Preparation: None
10 hours work experience per week
Under supervision at an approved field placement site in a school age child care program, the student will participate in all activities. The student will develop and supervise learning experiences, conduct activities, handle daily routines and respond to individual and group needs.
CSU

152 DIVERSITY ISSUES IN EARLY CHILDHOOD EDUCATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Analysis of the many contexts and variables related to an individual's socialization process and how these factors impact on one's work with children and families. Using an anti-bias approach, examines and discusses topics related to ethnicity, religion, race, sex, disability and lifestyles as represented in schools and society at large. Students will better understand their own attitudes toward groups other than their own and apply this knowledge to their work with young children. Applicable to the Child Development Permit Master Teacher multicultural specialization. Relevant for parents and others who work with families and children.
CSU
157 FOOD AND NUTRITION FOR CHILDREN  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to inform students of the nutritional needs of children from the time of conception until approximately eight years of age. Menu planning and nutrition education in a preschool setting are included.

CSU

170 FIELD EXPERIENCE WITH INFANTS AND TODDLERS  2 UNITS
Prerequisite: Completion of the following with a grade of “C” or better: CD 123, 124, 125, 126, 127, 128, 129 and 143
Corequisite: CD 132 or previous enrollment
Recommended Preparation: None
10 hours paid or 8 hours unpaid work experience per week
Under supervision at approved field placement sites, students will participate in all classroom activities. Students will design and modify the environment, develop and supervise learning experiences, handle routines and respond to individual and group needs under two years of age.

CSU

199 SPECIAL STUDIES OR PROJECTS IN CHILD DEVELOPMENT  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Child Development under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

CSU

298 SELECTED TOPICS IN CHILD DEVELOPMENT  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Child Development not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

CSU

299 SELECTED TOPICS IN CHILD DEVELOPMENT  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Child Development not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
**COMMUNICATION**

120 **INTERPERSONAL COMMUNICATION** 3 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Provides an opportunity for students to learn and apply in daily life practical principles of interpersonal communication. Emphasis on personal, situational and cultural influences and interaction. Designed to assist students in improving their own interpersonal communication skills. Attention given to human perception, interpersonal dynamics, listening, conflict management, verbal and nonverbal symbol systems.  
**CSU, AA/AS GE, CSU GE**

122 **PUBLIC SPEAKING** 3 UNITS  
(CAN SPCH 4)  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Offers an opportunity for general improvement in the basic process of public speaking with emphasis on individual to audience contexts. Introduction to rhetorical theory is included. Attention to basic elements of topic selection, analysis of diverse audiences, research, organization, argumentation and delivery of speeches and presentations.  
**UC, CSU, AA/AS GE, IGETC, CSU GE**

123 **ADVANCED PUBLIC SPEAKING** 3 UNITS  
Prerequisite: COMM 122 with a grade of "C" or "CR" or better or equivalent  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Advanced training in the preparation and delivery of common types of public speaking. Emphasis on the fundamental processes of oral communication.  
**UC, CSU**

124 **INTERCULTURAL COMMUNICATION** 3 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
To experience and learn about intercultural communication: the study of face-to-face communication between persons with significantly different beliefs, values, expectations and assumptions. Theoretical overview is presented; however, the course emphasis relies on its unique student composition; students from a variety of cultural backgrounds (national origin, ethnicity, age, gender, etc.) are encouraged to enroll. The resulting student-to-student dynamic offers a unique opportunity to experience and learn about practical similarities and differences between people of different cultural backgrounds.  
**UC, CSU, AA/AS GE, CSU GE**

135 **FUNDAMENTALS OF ORAL INTERPRETATION** 3 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Designed to give students an opportunity to develop skills in oral interpretation of various types of literature. Emphasis on the pleasure to be gained from reading fine literature aloud to others.  
**UC, CSU**

136 **READERS THEATRE** 3 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Designed to teach the theory, concepts and history of Readers Theatre; to give students the opportunity to learn the principles of literary analysis and oral interpretation; and to study methodologies and techniques in the development of written material from text into a medium of group communication.  
**UC, CSU**

137 **SMALL GROUP COMMUNICATION** 3 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Training for participation in and leadership of the various forms of small group communication. Concerned with the basic tools of critical thinking such as evidence, reasoning, language and the relevant psychological factors. In addition to examining these basic tools, students will become familiar with discussion techniques and learn the characteristics of, the uses for, and the limitations of various discussion forms.  
**UC, CSU**

145 **ARGUMENTATION** 3 UNITS  
(CAN SPCH 6)  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Emphasizes the construction and analysis of public argument. Covers the theory of argument, the processes and developments of arguments and the application of arguments to decision-making.  
**UC, CSU**
### 199 SPECIAL STUDIES OR PROJECTS
**IN COMMUNICATION** 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Communication under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

**UC, CSU**

### 240 INTERCOLLEGIATE FORENSICS
3 UNITS
**ABCD**
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Designed to give students an opportunity to improve their public speaking skills through intercollegiate forensic competition and other realistic speaking situations outside the classroom. Class and individual instruction is provided in the following speaking categories: public address, oral interpretation, impromptu, debate, and readers theatre. May be taken for 4 semesters.

**CSU**

### 298 SELECTED TOPICS IN COMMUNICATION
1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Communication not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

**UC, CSU**

### 299 SELECTED TOPICS IN COMMUNICATION
1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Communication not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

**UC, CSU**

### COMPUTER AND INFORMATION SCIENCE

**Students who wish to enroll in Microsoft applications (Word, Excel, PowerPoint) should refer to “Business Office Technology.”**

### 105 INTRODUCTION TO COMPUTING
3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Introductory small computing course for those desiring beginning computer knowledge and skills. Includes an overview of a typical personal computer system including input and output devices, the processor, and storage devices. Also includes hands-on experience with a computer and popular application software. Emphasis on those skills and knowledge needed to use and maintain a home or small business computer.

**CSU**

### 110 PRINCIPLES OF INFORMATION SYSTEMS
4 UNITS
(CAN CSCI 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Develops basic knowledge of computers and information systems. Broad overview of topics includes computer organization, hardware and software systems, and application software. Approximately one-third of the course will include hands-on problem solving using spreadsheets. The remainder consists of hands-on problem solving using tools including databases, presentation graphics, and word processing. (Specific software packages to be identified in class schedule.)

**UC, CSU**
COMPUTER MAINTENANCE AND A+ CERTIFICATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110
2 hours lecture, 3 hours laboratory
Prepares students for the A+ Certification exam, an industry-sponsored test that establishes a benchmark level of knowledge and competence expected of computer service technicians in entry-level positions. A+ Certification also serves as the foundation for computer service professionals who are pursuing other valuable industry certifications such as the Cisco Certified Networking Associate (CCNA), Network+, and Microsoft Certified Professional (MCP).
While preparing for the A+ Certification exam, students will gain a comprehensive knowledge base in computer hardware, DOS and Windows operating systems, networking basics, printers, and customer service. Hands-on labs using the latest computer components and operating systems will also provide an opportunity for students to enhance their skills in assembling, disassembling, servicing, troubleshooting, and upgrading advanced computer and networking systems.
CSU

NETWORK CABLING SYSTEMS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Designed for individuals interested in the physical aspects of computer network installation and cabling. Focuses on cabling issues related to network/internet connections and provides an understanding of industry trends and standards, types of cabling, physical and logical network topologies, and issues related to physical plant characteristics. Students will develop skills in installing jacks, stringing and mounting cable, cable testing, choice of wiring closets, and patch panel installation. Provides extensive hands-on use of the computer labs for documentation and design purposes as well as conducting internet research.
CSU

INTRODUCTION TO THE INTERNET 1.5 UNITS
(formerly CIS 210ABCD)
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110
1 hour lecture, 1.5 hours laboratory
Offers a practical overview of the Internet and web research. Students will gain hands-on experience in Internet services such as email, the World Wide Web, file transfer and newsgroups.
CSU

DATABASES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110
2 hours lecture, 3 hours laboratory
Beginning course in database software to provide students with a solid background in database applications and operation. Students will create, update and retrieve information using a computer. Beneficial for students who wish to use the computer to file, organize, retrieve, and create reports from data. (Specific software packages to be identified in class schedule.)
CSU

COMPUTER GRAPHICS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110
2 hours lecture, 3 hours laboratory
Beginning course in producing computer graphics utilizing a personal computer. Lectures, demonstrations and hands-on experience operating a computer and laser printer using page composition and graphics software. Utilizes a popular graphics software package to produce graphical presentations. (Specific software packages to be identified in class schedule.)
CSU

INTRODUCTION TO WINDOWS OPERATING SYSTEMS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110
2 hours lecture, 3 hours laboratory
Beginning course to provide hands-on understanding and use of an operating system such as Windows. Installation and configuration will be covered. Keyboard and mouse commands will be utilized in efficient operation of a computer system. Topics include the use of a computer operating system to install new programs, perform software maintenance, and customize computer software installations to accommodate individual preferences. Additional topics may include connecting computers to networks and peripheral equipment such as printers, scanners, and modems. (Specific software packages to be identified in class schedule.)
CSU
191 INTRODUCTION TO UNIX OPERATING SYSTEM 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, 120
2 hours lecture, 3 hours laboratory
Introductory course designed to provide an understanding of the history and advantages of the UNIX operating system. Topics include the history and evolution of the UNIX operating system, file and directory manipulation, screen editing with vi, permissions, customizing the user’s environment, simple shell programming, X-Windows and special features of the shell. Students will be able to troubleshoot common installation and configuration problems and set up and maintain user accounts. Lecture material reinforced with practical lab exercises.

CSU

198 SUPERVISED TUTORING 0 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
TBA hours
Uses a variety of educational tools to assist students with various learning needs. Can be used to strengthen prerequisite skills prior to enrolling in a specific course or to receive supplemental assistance while concurrently enrolled in another course. May be repeated with different content. No fee/no credit course.

CSU

199 SPECIAL STUDIES OR PROJECTS IN COMPUTER AND INFORMATION SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Computer and Information Science under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

CSU

200 INTRODUCTION TO COMPUTER ABCD NETWORKING 3 UNITS
Prerequisite: CIS 190
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Designed as an introduction to Local Area Networks (LANs) with emphasis on basic server administration skills. Students will create a LAN using a popular network operating system. Next, students will add peripherals and will use software tools to control their operation. LAN protocols will be covered and Internet protocols will be covered in depth. Throughout this course, theory will be demonstrated in laboratory exercises. (Specific software packages to be identified in class schedule.)

CSU

201 CISCO NETWORKING ACADEMY SEMESTER I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 120, 190, A+ Certification or one year of industry experience
2 hours lecture, 3 hours laboratory
First of four semester courses designed to provide classroom and laboratory experience in current and emerging networking technology that will empower students to enter employment and/or further education and training in the computer networking field. Includes safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, cabling, cabling tools, routers, router programming, star topology, IP addressing, and network standards. Particular emphasis on the use of decision-making and problem-solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems. Instruction and training provided in the proper care, maintenance and use of networking software, tools and equipment, and all local, state and federal safety, building and environmental codes and regulations.

CSU

202 CISCO NETWORKING ACADEMY SEMESTER II 3 UNITS
Prerequisite: CIS 201 or semester I of the Cisco Networking Academy at any accredited institution
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Second of four semester courses designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower students to enter employment and/or further education and training in the computer networking field. Includes safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, Ethernet, Token Ring, Fiber Distributed Data Interface, TCP/IP Addressing Protocol, dynamic routing, routing, and the network administrator’s role and function. Particular emphasis on the use of decision-making and problem-solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems. Instruction and training provided in the proper care, maintenance and use of networking software, tools and equipment, and all local, state and federal safety, building and environmental codes and regulations.

CSU
203 CISCO NETWORKING ACADEMY
SEMESTER III  3 UNITS
Prerequisite: CIS 202 or semester II of the Cisco Networking
Academy at any accredited institution
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Third of four semester courses designed to
introduce new content and extend previously
learned networking skills which will empower
students to enter the workforce and/or further their
education and training in the computer networking
field. Introduces and extends knowledge and
practical experience with switches, Local Area
Network (LAN) and Virtual Local Area Network
(VLAN) design, configuration and maintenance.
Students develop practical experience in skills
related to configuring LANs, WANs, Novell
networks, Internetwork Packet Exchange (IPX)
routing and Interior Gateway Routing Protocol
(IGRP) protocols and network troubleshooting.

CSU

204 CISCO NETWORKING ACADEMY
SEMESTER IV  3 UNITS
Prerequisite: CIS 203 or semester III of the Cisco Networking
Academy at any accredited institution
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Fourth of four semester courses designed to
introduce new content and extend previously learned
networking skills which will empower students to
enter the workforce and/or further their education and
training in the computer networking field. A task
analysis of current industry standards and
occupation analysis was used in the development of
content standards. Introduces and extends the
student's knowledge and practical experience with
Wide Area Networks (WANs), Integrated Services
Data Networks (ISDNs) and Point-to-Point Protocols
(PPP) and Frame Relay design, configuration and
maintenance. Students develop practical experience in
skills related to configuring WANs, ISDNs, PPP and
Frame Relay protocols and network troubleshooting.

CSU

211 WEB MARKUP LANGUAGES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, 132
2 hours lecture, 3 hours laboratory
Hands-on training in web publishing using a
markup language such as HTML, XHTML, or XML
and a stylesheet language such as CSS (Cascading
Style Sheets) or XSL (eXtensible Stylesheet
Language). Students will create a simple website
and upload it to a web server. Techniques for
creating web presentations compliant with current
World Wide Web Consortium (W3C) standards and
viewable by most web browsers will be stressed.
Topics include formatting text, organizing a website,
integrating images, linking to external files, linking to
email and FTP sites, principles of good web design,
lists, tables, frames, imagemap, forms, stylesheet,
and the cascade mechanism.

CSU

212 WEB PUBLISHING I  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 132, 211
2 hours lecture, 3 hours laboratory
Introductory web development emphasizing
production and design using web authoring
software. Students will apply skills and concepts to
plan and develop a small website. (Specific
software packages to be identified in class
schedule.)

CSU

213 WEB PUBLISHING II  3 UNITS
Prerequisite: CIS 140ABCD, 212
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Covers intermediate topics in web design and
production such as Cascading Style Sheets,
frames, forms, JavaScript, database integration,
usability and accessibility. Students will complete a
series of short assignments as well as a final
project. (Specific software packages to be
identified in class schedule.)

CSU

214 WEB SERVER MANAGEMENT  3 UNITS
Prerequisite: CIS 190
Corequisite: None
Recommended Preparation: CIS 290
2 hours lecture, 3 hours laboratory
Focuses on installing, configuring, maintaining and
managing Internet and intranet web servers
containing multiple websites using both Microsoft
Internet Information Server and Apache. Students
will install and configure a web server and related
services. Security and maintenance techniques will
be used. (Specific software packages to be
identified in class schedule.)

CSU

215 JAVASCRIPT PROGRAMMING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, 132, 211
2 hours lecture, 3 hours laboratory
Introductory course in JavaScript programming
focusing on creating interactive web pages. Topics
include integrating JavaScript with HTML, event-
handling, array, and writing and calling JavaScript
functions. Students will use JavaScript to perform
real-world tasks and create a variety of effects
including form validations, image rollovers, pull-
down menus, pop-up windows, form calculations,
and more.

CSU
216  **ACTIVE SERVER PAGES**  3 UNITS
Prerequisite: CIS 211 or HTML experience; CS 180 or 182 or experience with Visual Basic or Java; CIS 212 or experience developing a website
Corequisite: None
Recommended Preparation: CIS 213
2 hours lecture, 3 hours laboratory
Covers the development of programs used in websites using Active Server Pages (ASP) to deliver dynamic web content. Topics include database connectivity, security and e-commerce applications in website operations. Emphasis on programming in ASP to create dynamic web content.

217  **WEB GRAPHICS**  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 170ABCD, 212
2 hours lecture, 3 hours laboratory
This course is for anyone wishing to create graphics for the web. Covers graphics principles, screen design concepts, digitizing, and production of vector and raster images. Students will create attractive, compact graphics and mock web page layouts. (Specific software packages to be identified in class schedule.)

221  **WEB MULTIMEDIA**  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, 170ABCD, 190 or equivalent experience
2 hours lecture, 3 hours laboratory
Covers the fundamentals of multimedia. Topics include design, development and implementation of the technologies used to implement interactive multimedia applications using the Internet including streaming audio, streaming video and video conferencing. Fundamentals of various file formats for digital media will be addressed as well as compression and synchronization issues. Implementation technologies including hardware architectures for media processing are also included.

222  **WEB ANIMATION**  3 UNITS
Prerequisite: CIS 212
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Covers design, development and implementation of web-based animation using Macromedia Flash. Students will create animations and web interfaces. (Specific software packages to be identified in class schedule.)

230  **DESKTOP PUBLISHING**  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: Students should be able to create, edit and print documents using word processing software and be able to create simple graphics.
2 hours lecture, 3 hours laboratory
Uses modern desktop publishing software program to demonstrate the principles of publication and design, page layout techniques, typesetting fundamentals, integration of text and graphics, hard disk management, and output to color and monochrome printers. (Specific software packages to be identified in class schedule.)

240  **ADVANCED DATABASES**  3 UNITS
Prerequisite: CIS 140ABCD
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Continuation of the study of database software. Students will create, update and retrieve information using applications based upon the database programming language or upon Structured Query Language. Beneficial for students who wish to create very efficient customized applications. (Specific software packages to be identified in class schedule.)

250  **ADVANCED SPREADSHEETS**  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: Students should be able to create, edit and print tables and charts using a current spreadsheet program.
2 hours lecture, 3 hours laboratory
Addresses all aspects of spreadsheet macros, from simple keyboard initiated sequences to spreadsheet programming commands. Fully automated worksheets including forms, tables and charts will be created. (Specific software packages to be identified in class schedule.)

252  **ELECTRONIC COMMERCE**  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, 132, 212
2.5 hours lecture, 1.5 hours laboratory
Introduction to electronic commerce and the opportunities presented by the e-commerce revolution. Topics include e-commerce levels and options, security issues, and customer service concerns and support options. Students will build an online store with shopping cart features and implement an electronic payment system.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Corequisites</th>
<th>Recommended Preparation</th>
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<tbody>
<tr>
<td>253</td>
<td>ELECTRONIC MARKETING</td>
<td>3</td>
<td>Prerequisite: None</td>
<td>Corequisite: None</td>
<td>CIS 110, 132, 212</td>
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<td>2.5 hours lecture, 1.5 hours laboratory</td>
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<td>Designed to provide the small business</td>
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<td>a product or service on the Internet.</td>
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<td>Topics include search engine submission,</td>
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<td>methods for achieving good search</td>
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<td>engine ranking, marketing in newsgroups,</td>
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<td>using signature files, leveraging email</td>
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<td>swapping, web awards, establishing</td>
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<td>affiliate relationships, traffic analysis,</td>
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<td>and more.</td>
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<td>270</td>
<td>ADVANCED GRAPHICS</td>
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<td>Prerequisite: None</td>
<td>Corequisite: None</td>
<td>CIS 170ABCD or equivalen</td>
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<td>2 hours lecture, 3 hours laboratory</td>
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<td>Continuation of CIS 170ABCD, presenting</td>
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<td>advanced concepts of computer graphics</td>
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<td>including draw and paint programs,</td>
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<td>scanning, tracing, styles and templates,</td>
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<td>importing, exporting, vector</td>
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<td>and bitmap files. Lectures, demonstrations</td>
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<td>and hands-on experience in graphics</td>
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<td>utilizing a personal computer. Students</td>
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<td>will operate a computer and laser printer</td>
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<td>using page composition and graphics software.</td>
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<td>Utilizes popular graphics software to</td>
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<td>produce images. (Specific software packages</td>
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<td>to be identified in class schedule.)</td>
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<tr>
<td>281</td>
<td>ADVANCED PROGRAMMING (C++)</td>
<td>4</td>
<td>Prerequisite: CS 181</td>
<td>Corequisite: None</td>
<td>None</td>
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<tr>
<td>ABCD</td>
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<td>3 hours lecture, 3 hours laboratory</td>
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<td>Continuation of CS 181, designed to provide</td>
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<td>the programmer with professional training</td>
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<td>in memory management, documentation,</td>
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<td>structured programming, and programming to</td>
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<td>professional standards using C++. Explores</td>
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<td>some of the more advanced concepts of</td>
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<td>preprocessing, low-level data objects,</td>
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<td>recursion, and dynamic data structures</td>
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<td>including linked lists, stacks, queues,</td>
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<td>and trees. Laboratory instruction includes</td>
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<td>program development and execution.</td>
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<td>UC, CSU</td>
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<td>290</td>
<td>WINDOWS SYSTEM ADMINISTRATION</td>
<td>3</td>
<td>Prerequisite: CIS 190</td>
<td>Corequisite: None</td>
<td>CIS 120</td>
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<td>2 hours lecture, 3 hours laboratory</td>
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<td>Intensive introduction to multi-user,</td>
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<td>multi-tasking operating systems and</td>
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<td>networked operating systems. Students will</td>
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<td>explore a variety of topics including</td>
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<td>installation procedures, security issues,</td>
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<td>back-up procedures and remote access.</td>
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<td>Command line and graphical operating systems</td>
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<td>will be covered. Students will also attach</td>
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<td>peripherals and download and install</td>
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<td>software drivers. (Specific software packages</td>
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<td>to be identified in class schedule.)</td>
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<tr>
<td>291</td>
<td>UNIX SYSTEM ADMINISTRATION</td>
<td>3</td>
<td>Prerequisite: CIS 191</td>
<td>Corequisite: None</td>
<td>CIS 120</td>
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<td>2 hours lecture, 3 hours laboratory</td>
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<td>The basic skills necessary to be an effective</td>
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<td>UNIX system administrator are introduced.</td>
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<td>Designed for new UNIX administrators who</td>
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<td>wish to know more about the operations of</td>
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<td>the system. Covers basic administration</td>
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<td>topics such as disk management, system</td>
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<td>initialization, adding and removing users,</td>
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<td>backups and printing. UNIX server programs</td>
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<td>such as Apache, DNS, DHCP, Mail and Samba</td>
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<td>will also be covered.</td>
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<td>292</td>
<td>UNIX SHELL PROGRAMMING</td>
<td>2</td>
<td>Prerequisite: CIS 191; MATH 103 or</td>
<td>Corequisite: None</td>
<td>CIS 120</td>
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<td>1 hour lecture, 3 hours laboratory</td>
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<td>Introduction to programming with utilities</td>
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<td>and shell scripting languages in a UNIX</td>
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<td>environment. Covers the essential aspects of</td>
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<td>shell programming including similarities</td>
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<td>and differences among the three most</td>
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<td>popular shells: the Bourne shell, the C</td>
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<td>shell, and the Korn shell. Students will</td>
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<td>learn features including command line</td>
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<td>argument processing, debugging techniques,</td>
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<td>the use of sed to edit files, and the use</td>
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<td>of awk to format output.</td>
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<td>297</td>
<td>CIS CAPSTONE PROJECT</td>
<td>1</td>
<td>Prerequisite: Any 3 of the following</td>
<td>Corequisite: None</td>
<td>CIS 140ABCD, 190, 214, 201</td>
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<td>2 hours lecture/laboratory</td>
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<td>The CIS Capstone project is a supervised</td>
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<td>computer project in the information systems</td>
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<td>field to assist students in acquiring</td>
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<td>desirable work habits, attitudes, skills</td>
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<td>and career awareness. Project may be</td>
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<td>completed in either a paid or unpaid</td>
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298 SELECTED TOPICS IN COMPUTER AND INFORMATION SCIENCE 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Computer and Information Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN COMPUTER AND INFORMATION SCIENCE 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Computer and Information Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

UC, CSU

119 PROGRAM DESIGN AND DEVELOPMENT 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, MATH 110 or equivalent
3 hours lecture
Introductory course in program design and development using Java to serve as a foundation for more advanced programming, computer science or networking courses. Emphasizes the development of problem-solving skills as it introduces students to computer science through the use of a modern object-oriented programming language. Devotes attention to the development of effective software engineering practices emphasizing such principles as design decomposition, encapsulation, procedural abstraction, testing and software reuse. Students will learn and apply standard programming constructs, problem-solving strategies, the concept of an algorithm, fundamental data structures, the machine representation of data, introductory graphics and networking. Student must also be enrolled in CS 119L.

CSU

119L PROGRAM DESIGN AND DEVELOPMENT LAB 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: CIS 110, MATH 110 or equivalent
3 hours laboratory
Laboratory tutorials, drills and programming problems designed to help students master the concepts and programming projects presented/assigned in CS 119. Students must also be enrolled in CS 119. Offered as Credit/No Credit only.

CSU

180 INTRODUCTION TO VISUAL BASIC ABCD PROGRAMMING 4 UNITS
(formerly CIS 180ABCD)
Prerequisite: CS 119 or previous programming experience
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Introduction to computer programming using Visual Basic. Emphasis on practical applications of programming for today’s technology. Laboratory instruction will include program development and execution.

UC, CSU
181 INTRODUCTION TO C++ PROGRAMMING 4 UNITS
(formerly CIS 181ABCD)
Prerequisite: CS 119
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Introduction to computer programming using C++. Students with no previous programming experience in C++ learn how to plan and create well-structured programs. Students will learn how to write programs using sequence, selection and repetition structures, as well as how to create and manipulate sequential access files, structs, classes, pointers, and arrays.
UC, CSU

182 INTRODUCTION TO JAVA PROGRAMMING 4 UNITS
(formerly CIS 182ABCD)
Prerequisite: CS 119 or experience programming in C++ or Java; MATH 110 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Introductory course in the basics of the Java programming language focusing on object-oriented methodology. Topics include classes, methods, parameters, arrays, modularity, abstraction, exception handling, and stream and file I/O. In addition to writing and using new classes, students will utilize the AWT and/or Swing libraries of classes. Basic inheritance is introduced, although this is covered in more depth in the intermediate Java programming class (CS 282).

199 SPECIAL STUDIES OR PROJECTS IN COMPUTER SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Computer Science under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

280 INTERMEDIATE VISUAL BASIC ABCD PROGRAMMING 4 UNITS
(formerly CIS 280ABCD)
Prerequisite: CS 180ABCD
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Continuation of CS 180ABCD, providing the programmer with professional training with emphasis on documentation, structured programming and programming to professional standards using Visual Basic.
UC, CSU

282 INTERMEDIATE JAVA PROGRAMMING AND FUNDAMENTAL DATA STRUCTURES 4 UNITS
Prerequisite: CS 182; MATH 175 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Continuation of CS 182. Students will learn to implement and analyze a variety of data structures and the algorithms used with those data structures. Students will learn to create their own abstract data types and how and when to utilize them. Fundamental data structures include multidimensional arrays, linked lists, stacks, queues, heaps, trees, and hash tables. Students will learn when to use which of the available dynamic memory data structures. Tools for analyzing and predicting run time and memory usage are introduced, as is “big-oh” notation. A variety of sort algorithms are reviewed, analyzed for best, worst and average case performance, and compared with tree traversal algorithms. Students will develop increased sophistication in object-oriented basics such as inheritance, encapsulation, design of abstract data types, and polymorphism. Students will gain experience working on larger programs and managing large, multi-programmer projects. Laboratory instruction includes program development and execution.
CSU

298 SELECTED TOPICS IN COMPUTER SCIENCE 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Computer Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN COMPUTER SCIENCE 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Computer Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
CSU
DRAFTING TECHNOLOGY

001 BLUEPRINT READING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
CSU

005 INTRODUCTION TO THE BUILDING CODES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the fundamental concepts and interpretation of building codes and their enforcement. Emphasis on building requirements by types of construction and occupancy, fire and safety regulations and zoning and land use. Building plans and basic engineering principles will be studied for residential and commercial projects as a background for UBC application.
CSU

015 INTRODUCTION TO THE PLUMBING AND MECHANICAL CODES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Fundamentals of plumbing, mechanical and energy conservation codes related to the following: residential architecture; plumbing and water supply systems; heating, ventilation and cooling systems; heat flow concepts; and interpretation of California’s new Residential Energy Standards.
CSU

025 CONSTRUCTION ADMINISTRATION  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the laws and legal problems related to the construction industry; bidding procedures; systems of construction planning and project scheduling methods; construction accounting and cost control.
CSU

124 BASIC DRAFTING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Introduction to basic drafting techniques that the engineer and drafting technologist should have. Includes multiview projection, lettering, pictorial drawing and sketching, sections and conventions, dimensioning, auxiliaries, intersections and development with basic AutoCAD. Presented within the context of industrial techniques and standards.
(Also listed as ENGR 124. May not be taken if ENGR 124 has been taken.)
CSU

125 INTERMEDIATE DRAFTING – GRAPHICS AND PROCESSES  3 UNITS
Prerequisite: DTEC/ENGR 124, DTEC 130ABCD
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Continuation of the drafting methods covered in DTEC 124 with special emphasis on drafting techniques including organization and layout, dimensioning and tolerancing, working drawings, threaded fasteners, descriptive geometry and manufacturing processes. AutoCAD 2000 (or latest version) will be used in conjunction with board work and freehand sketching as used in modern industrial applications.
(Also listed as ENGR 125. May not be taken if ENGR 125 has been taken.)
CSU

126 ELECTRONIC DRAFTING  3 UNITS
Prerequisite: DTEC/ENGR 125, DTEC 130ABCD
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Application of electro-mechanical drawing methods as currently practiced in industry. Includes components and packaging, circuits, printed circuit board layout, interconnection diagrams and schematics. Problems to be done on AutoCAD.
CSU

127 SURVEY DRAFTING TECHNOLOGY  3 UNITS
Prerequisite: DTEC/ENGR 124, DTEC 130ABCD or equivalent
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Professional Civil Engineering/Surveyor’s office method drafting course that applies the basic skills and techniques acquired in DTEC 124 or ENGR 124. Areas covered are land surveying, land development procedures, legal descriptions, topographical analysis, earthworks, geographic control and subdivision processes.
CSU
128 DIMENSIONING AND TOLERANCING  3 UNITS
Prerequisite: DTEC/ENGR 124, DTEC 130ABCD or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Basic study in dimensioning and tolerancing of engineering drawings using ANSI Y14.5M-1982 specification.

129 ADVANCED ISOMETRICS  3 UNITS
Prerequisite: DTEC/ENGR 124, DTEC 130ABCD
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Study and intensive application of isometric and perspective pictorial drawings needed by technical and scientific handbooks, catalogs, brochures, magazines and book publications.

130 BASIC AUTOCAD  3 UNITS
ABCD  
Prerequisite: DTEC/ENGR 124 or equivalent
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Introduction to basic 2-D drawing techniques and commands in AutoCAD with emphasis on mechanical drafting. AutoCAD fundamentals in geometric construction, dimensions and text. Library of symbols, wblocks and xreference.

131 ARCHITECTURAL AUTOCAD  3 UNITS
ABCD  
Prerequisite: DTEC 130ABCD or equivalent
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Introduction to AutoCAD commands and 2-D drawing techniques with emphasis on basic architectural, interior design, and space planning projects. Library of symbols, patterns and graphics. Oblique and isometric projections.

132 3-D ADVANCED AUTOCAD  3 UNITS
ABCD  
Prerequisite: DTEC 130ABCD or equivalent
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Advanced 2-D drawing techniques and isometric projections in model space and paper space environments. 3-D coordinate systems, wireframe, wiremesh and 3-D surface modeling in multi-view projections. 3-D solid model display, shading and rendering in color.

199 SPECIAL STUDIES OR PROJECTS IN DRAFTING TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Drafting Technology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

298 SELECTED TOPICS IN DRAFTING TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Drafting Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN DRAFTING TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Drafting Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
110  ECONOMIC ISSUES AND POLICIES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
One-semester economics course designed to give students a general elementary knowledge of basic economic concepts and to serve as an introduction to more advanced economics courses. Surveys current economic subjects including consumer economics, inflation, recessions, competition, monopoly, world trade and competing economic systems.  (May not be taken if ECON 120 or 121 has been taken.)
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

120  PRINCIPLES OF MACROECONOMICS  3 UNITS  
(CAN ECON 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to principles of economic analysis, economic institutions and issues of public policy. Emphasis on macroanalysis including national income accounting, money and banking, business cycles and economic stabilization.
UC, CSU, AA/AS GE, IGETC, CSU GE

121  PRINCIPLES OF MICROECONOMICS  3 UNITS
(CAN ECON 4)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to principles of economic analysis, economic institutions and issues of public policy. Emphasis on the direction of production, allocation of resources, distribution of income through the price system (microanalysis) and international economics.
UC, CSU, AA/AS GE, IGETC, CSU GE

124  PRINCIPLES OF ECONOMICS
COMPUTER LAB  .3 UNIT
Prerequisite: None
Corequisite: ECON 120 or 121
Recommended Preparation: None
1 hour laboratory
Complements ECON 120 and 121 by providing computer-based tutorials to introduce the principles of economic analysis, economic institutions and issues of public policy.  Offered as Credit/No Credit only.
CSU

199  SPECIAL STUDIES OR PROJECTS IN ECONOMICS  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Economics under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298  SELECTED TOPICS IN ECONOMICS  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Economics not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299  SELECTED TOPICS IN ECONOMICS  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Economics not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
### EDUCATION

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Lecture/Laboratory Hours</th>
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### ELECTRONICS TECHNOLOGY

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<th>Prerequisite</th>
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<th>Lecture/Laboratory Hours</th>
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<td>199</td>
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<td>May be offered in a seminar, lecture</td>
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CSU
100 INTRODUCTION TO ENGINEERING 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
UC, CSU

120 ENGINEERING PROBLEM ANALYSIS 3 UNITS
Prerequisite: MATH 180 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Analysis of engineering problems and solutions using the digital computer. Fundamentals of programming in FORTRAN 77 including language commands.
UC, CSU

124 BASIC DRAFTING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Introduction to basic drafting techniques that the engineer and drafting technologist should have. Includes multiview projection, lettering, pictorial drawing and sketching, sections and conventions, dimensioning, auxiliaries, intersections and development with basic AutoCAD. Presented within the context of industrial techniques and standards. (Also listed as DTEC 124. May not be taken if DTEC 124 has been taken.)
CSU

125 INTERMEDIATE DRAFTING–GRAPHICS AND PROCESSES 3 UNITS
Prerequisite: ENGR/DTEC 124, DTEC130ABCD
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Continuation of the drafting methods covered in ENGR 124 with special emphasis on drafting techniques including organization and layout, dimensioning and tolerancing, working drawings, threaded fasteners, descriptive geometry and manufacturing processes. AutoCAD 2000 (or latest version) will be used in conjunction with board work and freehand sketching as used in modern industrial applications. (Also listed as DTEC 125. May not be taken if DTEC 125 has been taken.)
CSU

199 SPECIAL STUDIES OR PROJECTS IN ENGINEERING 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Engineering under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

200 ENGINEERING MECHANICS–STATICS 3 UNITS
(CAN ENGR 8)
Prerequisite: PHYC 190 with a grade of "C" or better
Corequisite: MATH 280
Recommended Preparation: None
3 hours lecture
Engineering applications of the principles of static equilibrium of force systems acting on particles and rigid bodies. Centroids and moments of inertia, analysis of trusses, frames and machines, forces in beams, introduction to dry friction.
UC, CSU

210 ELECTRIC CIRCUITS 3 UNITS
(CAN ENGR 12)
Prerequisite: MATH 280, PHYC 200
Corequisite: None
Recommended Preparation: None
3 hours lecture
Theory course dealing with the concepts of circuit analysis by reduction methods, source transformation, loop and nodal analysis, alternating current circuits, impedance, power and phasor diagrams.
UC, CSU

218 PLANE SURVEYING 4 UNITS
(CAN ENGR 10)
Prerequisite: MATH 170 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
2 hours lecture, 6 hours laboratory
Use, care and adjustment of surveying instruments. Fundamental surveying methods, traverse measurements and area computations. Introduction to horizontal and vertical curves, stadia, construction layout. Introduction to topographic mapping. Earth work computations. (Also listed under Surveying.)
UC, CSU

220 ENGINEERING MECHANICS–DYNAMICS 3 UNITS
Prerequisite: ENGR 200
Corequisite: None
Recommended Preparation: None
3 hours lecture
Kinematics and kinetics of particles and rigid bodies. Newtonian laws of motion, work and energy; linear and angular momentum. Application to engineering problems. Vector notation will be used.
UC, CSU
240 ADVANCED SURVEYING 4 UNITS
Prerequisite: ENGR 218
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Topographic, hydrographic and geodetic surveying. Precise equipment and control surveying, city and land surveys. Astronomical observations. State plane coordinates system. Route location and layout, transition, horizontal and vertical curves. Introduction to electronic and photogrammetric methods. U.S. Public Land Surveys and legal descriptions and an introduction to Global Positioning System (G.P.S.). (Also listed under Surveying.)
UC, CSU

260 ENGINEERING MATERIALS 3 UNITS
(CAN ENGR 4)
Prerequisite: CHEM 141 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Atomic and molecular structure of materials utilized in engineering. Analysis of the relationships between structure of materials and their mechanical, thermal, electrical, corrosion and radiation properties, together with examples of specific application to engineering problems.
UC, CSU

298 SELECTED TOPICS IN ENGINEERING 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Engineering not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN ENGINEERING 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Engineering not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU

ENGLISH

049A BASIC SPELLING AND PHONICS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Students will learn to hear and use the sounds of the English phonetic system to improve their reading and spelling skills. Focuses on those parts of the English sound system that are consistent and regular. Learn common spelling rules. Not open to students with credit in ENGL 049. Offered as Credit/No Credit only. Non-associate degree applicable.

049B INTERMEDIATE SPELLING AND PHONICS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
In this second spelling and phonics course, students will continue their study of the English spelling system by focusing on the way words look. Students will learn common spelling rules as well as exceptions to the rules, and be introduced to common spelling demons. Learn strategies for committing words to memory. Offered as Credit/No Credit only. Non-associate degree applicable.

053 BEYOND BASIC WRITING 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Designed for individualized group instruction, focusing on writing skills essential for effective expression in all college classrooms. Workshop approach allows for directed practice in areas of need as determined by the instructor and student. May be repeated for a maximum of 4 units. Offered as Credit/No Credit only. Non-associate degree applicable.

071 UPGRADE YOUR SENTENCES .5 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture
Mini-course which focuses on writing complete, error-free sentences using effective punctuation and transitional devices. Learn to identify and correct sentence boundary problems and to structure simple and complex sentences with clarity and precision. May be repeated for a maximum of 2 units. Offered as Credit/No Credit only. Non-associate degree applicable.
079 HOW WRITERS GET STARTED WITH COMPUTERS .5 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture
Hands-on mini-course in which students learn how to use the computer as a study assistant and communication tool for writing classes. The basics made simple: sending email, saving files, word processing, formatting, printing, searching the Web for research assignments, and much more. New writing technologies for self-empowerment in the digital age. May be repeated for a maximum of 2 units. Offered as Credit/No Credit only. Non-associate degree applicable.

090 BASIC ENGLISH SKILLS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: Placement based on assessment process
3 hours lecture, 1 hour laboratory
Designed to teach basic English skills through classroom lecture, small group and individualized instruction. Will promote students’ knowledge of spelling, vocabulary and grammar. Students will also demonstrate their knowledge by writing sentences and short paragraphs. Offered as Credit/No Credit only. Non-associate degree applicable.

098 ENGLISH FUNDAMENTALS 4 UNITS
Prerequisite: Credit in ENGL 090 or equivalent or assessment recommendation for ENGL 098
Corequisite: None
Recommended Preparation: None
4 hours lecture
Course in basic English skills. Students will study grammar, punctuation and standard written English usage. With an introduction to the writing process, students will learn basic sentence patterns to compose paragraphs and one multi-paragraph essay. Offered as Credit/No Credit only. Non-associate degree applicable.

098R BASIC READING SKILLS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: Placement based on reading assessment process or equivalent skills. Recommend concurrent enrollment in ENGL 098.
3 hours lecture, 1 hour laboratory
In this course students concentrate on the development of basic reading skills. Focus on building vocabulary, increasing reading speed and improving comprehension of short reading selections. Basic study skills are also introduced. Offered as Credit/No Credit only. Non-associate degree applicable.

111 BASIC COMPOSITION 3 UNITS
(formerly ENGL 100)
Prerequisite: Credit in ENGL 098 or equivalent or a grade of “C” or better in ESL 106 or completion of the assessment process for ENGL 111
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory
Designed to prepare students for entry into ENGL 120 (English 1A, traditional freshman composition). Students will practice the writing process by composing sentences, paragraphs and essays with emphasis on correct and effective expression through the study of appropriate language skills. Readings will be studied to stimulate clarity of thought and written expression. By the end of the course, students will be able to write a basic position paper by using and acknowledging at least one source. AA/AS GE

111R INTERMEDIATE READING SKILLS 3 UNITS
(formerly ENGL 100R)
Prerequisite: None
Corequisite: None
Recommended Preparation: Successful completion of ENGL 098R or equivalent based on reading assessment measures. Recommend concurrent enrollment in ENGL 111.
3 hours lecture, 1 hour laboratory
Reading class which stresses comprehension of intermediate level reading selections. Emphasis on vocabulary development and identification of main ideas, supporting details, inferences, fact and opinions and patterns of organization.

120 COLLEGE COMPOSITION AND READING 3 UNITS
(CAN ENGL 2; CAN ENGL SEQ A = ENGL 120+121)
Prerequisite: ENGL 111 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory
Traditional freshman composition course. Students will study the elements and principles of composition through the practice of writing narrative and expository essays and a research paper. Utilizing word processing in the computer lab, revision is stressed as a means of achieving effective skills in writing. Assigned readings stimulate critical thinking and effective writing. Emphasis on using outside sources, documenting them according to MLA format. UC, CSU, AA/AS GE, IGETC, CSU GE

120R ADVANCED READING AND CRITICAL THINKING SKILLS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: Successful completion of ENGL 111R or equivalent based on reading assessment measures. Recommend concurrent enrollment in ENGL 120.
3 hours lecture
Focuses on critical thinking and analytical interpretation of college reading selections in the sciences and liberal arts. Students will learn strategies to improve their vocabulary and reading comprehension, as well as increase reading speed and fluency. CSU
122 INTRODUCTION TO LITERATURE 3 UNITS
(CAN ENGL 4; CAN ENGL SEQ A = ENGL 120+121)
Prerequisite: ENGL 120 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduces literature through the reading, analysis and discussion of various genres such as myths, folktales, essays, short stories, poems, plays and novels. Literature encompasses different time periods and a variety of male and female authors from around the world. Students will use the literature to write critical and appreciative essays.
UC, CSU, AA/AS GE, IGETC, CSU GE

124 ADVANCED COMPOSITION: CRITICAL REASONING AND WRITING 3 UNITS
Prerequisite: ENGL 120 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory
Designed to develop critical thinking, reading and writing skills beyond the level achieved in ENGL 120. Focuses on the development of logical reasoning and analytical and argumentative writing skills.
UC, CSU, IGETC, CSU GE

126 CREATIVE WRITING 3 UNITS
(CAN ENGL 6)
Prerequisite: ENGL 111 with a grade of “C” or “CR” or better or assessment for ENGL 120 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
This course affords the student the opportunity to write short prose, poetry and drama. In a positive atmosphere, students will explore, study and analyze techniques in the works of professional writers and in the works of students. Ample opportunity will be directed toward publication of students’ work.
UC, CSU

135- NEwsPAPER PRODUCTION 4 UNITS
138
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Provides practice in producing tabloids and newsletters, particularly the campus newspaper. Instruction in the basic principles of journalism including how to gather, evaluate and write basic types of news stories, and to implement them in the production of the campus newspaper. Additional hours per week outside of class required.
CSU

150 LIBRARY RESEARCH METHODS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Designed to give students confidence in doing research and to provide the skills for compiling a term paper. Introduces students to the role of information and libraries, time management skills in research, use of computerized and standard library sources, and a brief introduction to the Internet. Emphasis on using information as a basis for effective decision-making to improve personal and professional endeavors. Students will design a research project, implement an efficient research strategy, and complete a written research project.
UC credit limit, CSU

171 HOW WRITERS GET MOTIVATED TO WRITE 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Mini-course emphasizing effective strategies for thinking and writing creatively. How to get motivated and focused when faced with writing assignments and exams. Methods for effective thinking out loud and on paper. Strategies for success in college writing and test-taking for any level of student. Offered as Credit/No Credit only.

199 SPECIAL STUDIES OR PROJECTS IN ENGLISH 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of English under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

201 INTRODUCTION TO IMAGES OF WOMEN IN LITERATURE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
Focuses on women and their roles in society as portrayed in various forms of literature, past and present. Students may read poetry, short stories, novels, plays, and view films which will provide them with a broad base for understanding the changing role of women throughout history. Works by significant male and female authors will be used reflecting a broad spectrum of political, cultural and historical views, and may include authors such as Jane Austen, George Eliot, Virginia Woolf, William Shakespeare, Amy Tan, Alice Walker, Sandra Cisneros, Norman Mailer, Thomas Hardy, Ernest Hemingway, Sylvia Plath and others.
UC, CSU, AA/AS GE, IGETC, CSU GE
202 INTRODUCTION TO FILM AS LITERATURE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
Survey course to study film as a 20th century form of literature. Students will view a variety of films spanning the 100 years of film history, from the silent era to the present, to develop an understanding of the different types of films, the film-making process itself, and the historical, political and sociological context of cinema. Key figures in film history such as Buster Keaton, John Ford, Orson Welles, Alfred Hitchcock, Spike Lee, Woody Allen, Akira Kurosawa, and others will be studied.

UC, CSU, AA/AS GE, IGETC, CSU GE

214 MASTERPIECES OF DRAMA 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
Surveys masterpieces in drama beginning with works from ancient Greece and concluding with plays from the 20th century. Although other types of drama may be discussed, the primary texts will be comedies and tragedies. Representative playwrights include Sophocles, William Shakespeare, Moliere, Henrik Ibsen, Susan Glaspell, Eugene O'Neill, Arthur Miller, Samuel Beckett, Lorraine Hansberry, August Wilson, and others. Texts will be read, analyzed, discussed, and written about in essay format.

UC, CSU, AA/AS GE, IGETC, CSU GE

217 FANTASY AND SCIENCE FICTION SURVEY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
Survey course designed as a reading course of fantasy and science fiction, a unique literary genre with an unparalleled and still growing popularity. Readings selected cover a diverse spectrum of fantasy and science fiction. Oral and written discussion of such readings and their relevance to current trends will be emphasized. Analytical or original creative writings will be included.

UC, CSU, AA/AS GE, IGETC, CSU GE

221 BRITISH LITERATURE I 3 UNITS
Prerequisite: ENGL 120 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: ENGL 122
3 hours lecture
Surveys British literature from the Old English Period to the Romantic Period. Students will read and interpret the literature from historical, social, and philosophical viewpoints. Authors sampled may include Geoffrey Chaucer, William Langland, Edmund Spenser, William Shakespeare, Ben Johnson, John Milton, Lady Mary Wroth, Aphra Behn, and Jonathan Swift.

UC, CSU, AA/AS GE, IGETC, CSU GE

222 BRITISH LITERATURE II 3 UNITS
Prerequisite: ENGL 120 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: ENGL 122
3 hours lecture
Surveys British literature from the Romantic Period to the present. Students will read and interpret the literature against a background of the historical, social and philosophical developments of the time. Authors sampled may include William Blake, Mary Wollstonecraft, William Wordsworth, Samuel Coleridge, Lord Byron, Percy Shelley, John Keats, Elizabeth Browning, Lord Tennyson, Robert Browning, Emily Bronte, Matthew Arnold, Christina Rossetti, Oscar Wilde, Jane Austen, Thomas Hardy, William Yeats, Virginia Woolf, James Joyce, Doris Lessing and Derek Walcott.

UC, CSU, AA/AS GE, IGETC, CSU GE

231 AMERICAN LITERATURE I 3 UNITS
Prerequisite: ENGL 120 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: ENGL 122
3 hours lecture
First course in the study of American literature which explores literary works and their political, religious, economic and aesthetic context from pre-colonial America until 1860. Reading selections may consist of poetry, short stories, novels, and nonfiction prose, including essays and autobiographies. Authors studied include various anonymous Native Americans, Pedro de Casteñeda, William Bradford, Anne Bradstreet, Benjamin Franklin, Thomas Jefferson, Judith Sargent Murray, Washington Irving, Catherine Sedgwick, James Fennimore Cooper, Henry David Thoreau, Walt Whitman and many others. Selections from the major writers will be read, analyzed, discussed and written about in essay format.

UC, CSU, AA/AS GE, IGETC, CSU GE

232 AMERICAN LITERATURE II 3 UNITS
Prerequisite: ENGL 120 with a grade of “C” or better or equivalent
Corequisite: None
Recommended Preparation: ENGL 122
3 hours lecture
Second course in the study of American literature which explores literary works and their political, religious, economic and aesthetic context from 1860 to the present. Reading selections may consist of poetry, short stories, novels, plays and nonfiction prose, including essays. Authors to be studied include Abraham Lincoln, Frederick Douglass, Mark Twain, Edgar Allan Poe, Walt Whitman, Emily Dickinson, Eugene O’Neill, Gertrude Stein, Langston Hughes, Ernest Hemingway, John Steinbeck, Toni Morrison, and others. Selections from the major writers will be read, analyzed, discussed and written about in essay format.

UC, CSU, AA/AS GE, IGETC, CSU GE
270  WORLD LITERATURE I  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
Surveys major works from various continents and cultures prior to 1500 A.D. Focuses on the historical, social, philosophical and cultural aspects of literature and studies the roles of women and men. Minority perspectives will be included. Students will read works from the ancient Mediterranean world, south and east Asia, Europe, Middle East, Africa, and the early Americas.
UC, CSU, AA/AS GE, IGETC, CSU GE

271  WORLD LITERATURE II  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
Surveys major works from various continents and cultures from 1500 A.D. to the present. Focuses on the historical, social, philosophical and cultural aspects of literature and studies the roles of women and men. Minority perspectives will be included. Students will read works from Asia, the Middle East, Africa, Europe, the Americas, Australia and New Zealand.
UC, CSU, AA/AS GE, IGETC, CSU GE

275  LITERARY PERIOD    3 UNITS
276  MAJOR AUTHOR    3 UNITS
277  LITERARY THEME    3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENGL 120
3 hours lecture
These courses are designed to provide an in-depth study of a literary period (275), a major author (276), or a theme in literature (277). The readings selected will cover a diverse spectrum of literature drawn from one literary period (e.g., ENGL 275 Literary Period: American Romantic Poets), one major author (e.g., The Short Stories of Flannery O’Connor), or a theme in literature (e.g., Chicano Literature), in addition to at least one secondary work focusing upon the literature. Oral and written discussion of such readings and their relevance to the period, author or theme will be emphasized. May be repeated as the subject matter changes as indicated in the subtitle (e.g., Short Stories of Flannery O’Connor or Poetry of Emily Dickinson).
UC, CSU, AA/AS GE, IGETC, CSU GE

298  SELECTED TOPICS IN ENGLISH  1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in English not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
English as a Second Language classes are designed to improve English reading, writing, grammar, listening and speaking skills. Learning English will help students attain employment or pursue degree and certificate programs that use the English language for instruction. Classes at the 100 level and above can be used as elective credit for the Associate Degree. ESL 103 and 106 transfer as elective credit to CSU/UC.

The ESL program is divided into four levels. Students should see a counselor to select additional courses in other areas for which their language skills will be acceptable.

Level I: Basic college ESL focuses on reading short passages, writing sentences, connecting them into basic paragraphs, and having discussions using the present, past and future verb tenses.

- ESL 096 English as a Second Language I 5
- ESL 097 Listening and Speaking I 3
- ESL 098 ESL Reading and Vocabulary Development I 3
- ESL 099A ESL for the Workplace I 3

Level II: Low-intermediate college ESL focuses on reading short academic passages, writing complete paragraphs, discussing topics and giving short presentations using the simple, progressive, and present and past perfect verb tenses.

- ESL 099A or B ESL for the Workplace I or II 3
- ESL 100 English as a Second Language II 5
- ESL 101 Listening and Speaking II 3
- ESL 102 ESL Reading and Vocabulary Development II 3

Level III: High-intermediate college ESL focuses on reading more complex academic passages, connecting paragraphs into short essays, note-taking and study skills, and orally presenting academic work using all verb tenses.

- ESL 099B ESL for the Workplace II 3
- ESL 103 English as a Second Language III 5
- ESL 104 Listening and Speaking III 3
- ESL 299 ESL Reading and Vocabulary Development III 3

Level IV: Advanced college ESL focuses on reading college level texts, writing more complex essays, increasing note-taking and study skills, and presenting oral reports using all verb tenses.

- ENGL 098R Basic Reading Skills 3
- ESL 106 English as a Second Language IV 5

Students will receive an "ESL Certificate of Completion" when they complete ESL 106 with a grade of "C" or better.
**097 LISTENING AND SPEAKING I** 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: Placement based on assessment process or equivalent skills
3 hours lecture

First course in the study of English listening and speaking skills designed for students whose first language is other than English. Designed to improve listening comprehension as well as increase fluency and accuracy in spoken English in both academic and vocational environments. Practice skills learned in ESL 096, learn and use new vocabulary, and acquire academic skills such as selective listening, note-taking, and problem solving. **Offered as Credit/No Credit only. Non-associate degree applicable.**

**100 ENGLISH AS A SECOND LANGUAGE II** 5 UNITS

Prerequisite: Successful completion of ESL 096 or assessment recommendation for ESL 100
Corequisite: None
Recommended Preparation: None
5 hours lecture, 1 hour laboratory

Second core course in the study of English reading, writing and grammar designed for students whose first language is other than English. Further develops and adds to the basic skills taught in ESL 096. Includes intermediate reading, paragraph writing, grammar, and sentence structure. One hour a week will be spent using the computer lab software designed to reinforce reading, writing and grammar skills introduced in class.

**098 ESL READING AND VOCABULARY DEVELOPMENT I** 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: Advisory placement in ESL 096 or equivalent based on assessment process
3 hours lecture

Beginning level course designed to extend ESL students' vocabulary and reading ability. Emphasis on improving reading skills and strategies as well as techniques and exercises for developing vocabulary. Students are encouraged to take this class concurrently with ESL 096. **Offered as Credit/No Credit only. Non-associate degree applicable.**

**101 LISTENING AND SPEAKING II** 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: Placement upon successful completion of ESL 097 or equivalent based on assessment process
3 hours lecture

Second course in the study of English listening and speaking skills designed for students whose first language is other than English. Further develops and adds to skills learned in ESL 097. Includes intermediate listening comprehension practice as well as discussion and presentation skills in spoken English in both academic and vocational environments. Practice skills learned in ESL 100, learn and use new vocabulary, and practice academic skills such as selective reading and listening, note-taking, using outside resources and problem solving.

**099A ESL FOR THE WORKPLACE I** 3 UNITS

Prerequisite: Advisory placement based on assessment process or equivalent skills
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory

First course in the study of English for the workplace for students whose first language is other than English. Supplements language skills taught in ESL 096 and focuses on using English in business situations. Learn simple business vocabulary, basic writing and oral communication skills, and word processing skills. **Offered as Credit/No Credit only. Non-associate degree applicable.**

**102 ESL READING AND VOCABULARY DEVELOPMENT II** 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: ESL 098 or advisory placement in ESL 100 or 103 based on assessment process
3 hours lecture

Intermediate level course designed to extend the range of ESL students' vocabulary and reading ability. Focuses on improving reading skills and strategies as well as understanding and use of academic vocabulary. Academic vocabulary development is also an emphasis. Students will gain both a passive and active command of word form and word choice for the intermediate level, and learn a variety of words and how to use them. Students are encouraged to take this class concurrently with ESL 100.

**099B ESL FOR THE WORKPLACE II** 3 UNITS

Prerequisite: Advisory placement based on successful completion of ESL 099A or equivalent based on assessment process or equivalent skills
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory

Second course in the study of English for the workplace for students whose first language is other than English. Supplements language skills taught in ESL 100 and develops and adds to business English skills taught in ESL 099A. Learn business vocabulary, intermediate writing and oral communication skills, and computer skills. **Offered as Credit/No Credit only. Non-associate degree applicable.**
103 ENGLISH AS A SECOND LANGUAGE III  5 UNITS
Prerequisite: Successful completion of ESL 100 or assessment recommendation for ESL 103
Corequisite: None
Recommended Preparation: None
5 hours lecture, 1 hour laboratory
Third core course in the study of English reading, writing and grammar designed for students whose first language is other than English. Further develops and adds to skills taught in ESL 100. Includes high-intermediate reading, paragraph and short essay writing, grammar and sentence structure. One hour a week will be spent using the computer lab software designed to reinforce reading, writing and grammar skills introduced in class.
UC credit limit, CSU

104 LISTENING AND SPEAKING III  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: Placement upon successful completion of ESL 101 or equivalent based on assessment process
3 hours lecture
Third course in the study of English listening and speaking skills designed for students whose first language is other than English. Further develops and adds to skills learned in ESL 101. Includes high-intermediate listening comprehension practice as well as discussion and presentation skills in spoken English in both academic and vocational environments. Practice skills learned in ESL 103, learn and use new vocabulary, and practice academic skills such as close reading and listening, note-taking, analyzing and classifying, using outside resources and problem solving.

106 ENGLISH AS A SECOND LANGUAGE IV  5 UNITS
Prerequisite: Successful completion of ESL 103 or assessment recommendation for ESL 106
Corequisite: None
Recommended Preparation: None
5 hours lecture, 1 hour laboratory
Fourth core course in the study of English reading, writing and grammar for students whose first language is other than English. Further develops and adds to skills taught in ESL 103. Includes advanced reading, paragraph and essay writing, grammar, and sentence structure. One hour a week will be spent using the computer lab software designed to reinforce reading, writing and grammar skills introduced in class.
UC credit limit, CSU

199 SPECIAL STUDIES OR PROJECTS IN ENGLISH AS A SECOND LANGUAGE  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of English as a Second Language under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

298 SELECTED TOPICS IN ENGLISH AS A SECOND LANGUAGE  1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in English as a Second Language not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN ENGLISH AS A SECOND LANGUAGE  1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in English as a Second Language not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
### Entrepreneurship–Small Business Management

#### Business (Entrepreneurship) Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Hours Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td><strong>Entrepreneurship: Starting and Developing a Business</strong></td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
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<tr>
<td></td>
<td>Designed to provide the prospective small business manager with the most up-to-date skills necessary in the planning function of opening one's own business. Emphasis on sources of financing, site locations, legal problems, marketing surveys, organizational structure, and self-analysis to determine one's personal readiness for entrepreneurship.</td>
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<td>112</td>
<td><strong>Entrepreneurship: Successful Marketing</strong></td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<td>Designed to provide the small business owner with the necessary skills to market a product or service. Examines the essential elements of a marketing strategy, the four P's: Product, Place (Distribution), Price and Promotion. Also examines the relationship between sales and marketing and how they function together in the small business environment.</td>
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<tr>
<td>119</td>
<td><strong>Entrepreneurship: Financing a Small Business</strong></td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<td>Designed to provide the prospective small business owner or manager with the knowledge required to understand and control the cash management function of his/her business. Emphasis on the types of financing, understanding debt vs. equity financing, cash flow analysis, borrowing and investment, forecasting and budgeting.</td>
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<tr>
<td>141</td>
<td><strong>Entrepreneurship: Managing a New Business</strong></td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<td></td>
<td>Designed to help the student apply theories of marketing, management, personnel, finance and production to problems encountered daily in managing a business. Focuses on practical solutions to common business management problems.</td>
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</tbody>
</table>

### Environmental Technology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Hours Lecture</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td><strong>Introduction to Environmental and Occupational Safety and Health (OSH) Technology</strong></td>
<td>4</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Designed to provide a general overview of the environmental (ENV) hazardous materials technology area with emphasis on hazardous materials, hazardous waste, and worker health and safety. The history of pollution leading to current legislation, and current best practices of handling hazardous substances to minimize its harmful impact on society, the environment and people will be stressed.</td>
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<tr>
<td>110</td>
<td><strong>Pollution Prevention</strong></td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
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<tr>
<td></td>
<td>Centers on various raw materials and chemicals used in industry, examining the changes that occur as they move through the industrial process, and understanding the material balance concept of inventory. Discussions of applicable regulations will be included. Topics include the importance of waste minimization/pollution prevention concepts, and residential waste generation, reduction and prevention. Students will develop a waste source reduction plan.</td>
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<tr>
<td>130</td>
<td><strong>Environmental/Occupational Health Effects of Hazardous Materials</strong></td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Covers the acute and chronic health effects produced by exposure to chemical, physical and biological agents. Emphasis on hazardous materials commonly associated with industrial operations, waste disposal, and remediation sites. Topics include routes of entry, toxic effects, risk evaluation, permissible exposure limits, medical surveillance, control methods for reducing exposure, and use of Material Safety Data Sheets (MSDSs) to develop strategies to reduce worker exposure.</td>
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</tr>
</tbody>
</table>
135 WORKPLACE HEALTH AND SAFETY  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to provide an overview of elements which are incorporated in a comprehensive workplace health and safety program. Emphasizes methods used to reduce accidents/injuries through application of workplace health protection and safety fundamentals. Topics include safety inspection, protocols, safety audits, data collection and analysis techniques, interpretation of safety data, implementation of safety programs, worker education and essential personal protection equipment.

CSU

150 HAZARDOUS WASTE MANAGEMENT APPLICATIONS  4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Overview of hazardous waste regulations with emphasis on generator compliance, site investigation and remediation, permitting, enforcement and liability. Lecture portion explains the hazardous waste regulatory framework, introduces students to the wide variety and types of environmental resources available, and develops research skills in the hazardous waste area. Laboratory portion complements the lectures by providing hands-on application of the regulations at the technician level. Proper methods of preparing a hazardous waste manifest, labeling of storage containers, sampling and analysis, preparing a Phase I Environmental Audit, and selecting environmental consultants are among the many skills developed in the laboratory.

CSU

199 SPECIAL STUDIES OR PROJECTS IN ENVIRONMENTAL TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Environmental Technology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

CSU

200 HAZARDOUS MATERIALS MANAGEMENT APPLICATIONS  4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Requirements and applications of federal, state and local laws and regulations relating to hazardous materials. Emphasizes compliance with the Department of Transportation, OSHA Hazard Communication Plan, Community Right-To-Know, Proposition 65, Emergency Response Plan, and ISO14000. Lecture portion provides an understanding of the legal framework of hazardous materials laws. Laboratory portion focuses on applications of these laws such as proper labeling, shipping and handling of hazardous materials, obtaining and interpreting MSDSs, permitting and monitoring functions, as well as planning and reporting functions. Students will develop plans related to hazardous materials management.

CSU

205 SAFETY AND RISK MANAGEMENT ADMINISTRATION  4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Hands-on instruction on how accidents and incidents occur in the occupational health and safety environment. Instruction in the establishment and maintenance of safety programs and comprehensive analysis of occupational health programs with emphasis on safety program management. Topics include: planning approaches to safety and health management used by international, national and local regulatory agencies, insurance companies and professional societies; risk management; worker compensation; employee accommodations and the workplace. Students will develop plans related to safety and risk management.

CSU

230 SAFETY AND EMERGENCY RESPONSE  4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ENVT 100 and 130 or equivalent
3 hours lecture, 3 hours laboratory
Designed to provide students with hands-on instruction in safety and emergency response to chemical and physical exposures in industrial and field settings. Topics include: hazard analysis; contingency planning; housekeeping and safety practices including proper use and selection of PPE, site control and evaluation; handling drums and containers; field sampling and monitoring; proper use of instruments; incident response planning; emergency response including field exercises in the use of PAPR and SCBA; and an understanding of the ICS system. Satisfies requirements for generalized employee training under OSHA [29 CFR 1910.120 and Title 8, California Code of Regulations 5192 (e) (3) (A)].

CSU
EXERCISE SCIENCE

Courses which meet the activity requirement for graduation have an asterisk (*). Intercollegiate sports do not meet the activity requirement.

Exercise Science activity and intercollegiate sports classes which are indicated by a number ONLY (ES 001) may be taken FOUR times. An activity class indicated by a number AND a letter (ES 014A) may be repeated ONCE, provided that the TOTAL enrollment in that type of activity (e.g., body building) not exceed FOUR. Students must progress from beginning through intermediate and advanced levels. The following may not be repeated: ES 080ABCD, ES 084ABCD, ES 088ABCD.

A physical examination is recommended for all Exercise Science classes if the student has medical problems or is over the age of 30.

EXERCISE SCIENCE COURSES

001* ADAPTED PHYSICAL EXERCISE 1-1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2-3 hours lecture/laboratory
Assessment of physical performance status and postural evaluation. Individually prescribed exercise program and individually prescribed programs for physically handicapped. Recreational games and individual sports adapted to students’ capabilities. Offered as Credit/No Credit only.
UC credit limit, CSU

009* AEROBIC DANCE EXERCISE 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Participation in aerobic dance exercise emphasizing conditioning of the musculoskeletal system, improvement of the cardiovascular system, increasing the efficiency of the respiratory system and increasing flexibility. Principles of physical fitness, conditioning and other relevant health-related topics will be covered.
UC credit limit, CSU

010* FOODS FOR FITNESS .5-1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 - 3 hours laboratory
Fitness Center course designed to teach nutrition guidelines and provide opportunities for students to analyze their eating habits. Format is open-entry/exit, computer log-in. Attendance of 24 class periods is required for .5 unit. Attendance of 48 class periods is required for 1.0 unit. Workouts and consultation with an instructor, as well as written and computer assignments. Each student will be assessed in the areas of fitness and diet and an individualized diet analysis will be provided. Offered as Credit/No Credit only.
011* LIFELONG FITNESS .5-1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5-3 hours laboratory
Fitness Center course designed to develop and encourage positive attitudes and habits with regard to cardiovascular efficiency, body composition, muscular strength and endurance, and flexibility. Format is open entry/exit, computer log-in. Attendance of 24 class periods is required for .5 unit. Attendance of 48 class periods is required for 1.0 unit. Each student will be assessed in the areas of body composition, cardiovascular efficiency, muscular strength and endurance, and flexibility. An individual fitness profile will then be established. From this profile an individual fitness prescription will be developed. Fitness activity will primarily utilize exercise equipment organized into an aerobic super circuit with additional activities prescribed in an aerobics machine area, body parts weight training area, and flexibility area. Additional assessment at the conclusion of the semester will provide data necessary to evaluate the accomplishment of stated goals. Offered as Credit/No Credit only.
UC credit limit, CSU

012* APPLIED FITNESS .5-1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 - 3 hours laboratory
Fitness Center course designed to provide advanced exercisers with the opportunity to increase their fitness levels by use of a longer and more demanding aerobic circuit. Format is open entry/exit, computer log-in. Attendance of 24 class periods is required for .5 unit. Attendance of 48 class periods is required for 1.0 unit. Each student will be assessed in the areas of body composition, cardiovascular efficiency, muscular strength and endurance, and flexibility. An individualized fitness program will then be prescribed utilizing goals established jointly by the student and instructor. Offered as Credit/No Credit only.
UC credit limit, CSU

013* FLEXIBILITY FITNESS 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Flexibility program which provides students with knowledge of their optimal range of motion. Emphasizes participation that suits the needs of all age and ability levels including dancers, athletes, seniors and fitness enthusiasts.
UC credit limit, CSU

014A* BEGINNING BODY BUILDING 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Instruction and practice in conditioning, running and resistance exercises, with emphasis on total fitness of the individual.
UC credit limit, CSU

014B* INTERMEDIATE BODY BUILDING 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 014A
3 hours lecture/laboratory
Instruction and practice in weight lifting and weight training with emphasis on techniques of lifting. Individual program adaptation is stressed.
UC credit limit, CSU

014C* ADVANCED BODY BUILDING 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 014B
3 hours lecture/laboratory
Advanced skills and techniques of body building.
UC credit limit, CSU

015* STRENGTH AND STRETCH 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Exercise class for all exercisers providing a progression toward increased flexibility while adding the element of weight training, including injury rehabilitation with a guest trainer. Addresses strengthening specific problem areas of muscle weakness. Students will tone areas not strengthened with dancing or other exercise activities. By focusing on each specific area of the body, students will increase their knowledge of injury prevention. Students will also learn the fundamental principles of physical fitness and its impact on lifelong health and wellness. Emphasizes participation that suits the needs of all age and ability levels including dancers, athletes, seniors and fitness enthusiasts.
UC credit limit, CSU

018* CARDIO STRETCH 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Exercise class for all exercisers, including injury rehabilitation with a guest trainer. Students will tone areas not strengthened with dancing or other exercise activities. By focusing on each specific area of the body, students will increase their knowledge of total fitness. Students will learn the fundamental principles of physical fitness and its impact on lifelong health and wellness. Emphasizes participation that suits the needs of all age and ability levels including dancers, athletes, seniors and fitness enthusiasts.
UC credit limit, CSU
019A* BEGINNING PHYSICAL FITNESS 1.5 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture/laboratory  
Instruction in physical conditioning, nutrition and weight control. Open to any student wishing to fulfill one semester of the exercise science activity requirement.  
UC credit limit, CSU

019B* INTERMEDIATE PHYSICAL FITNESS 1.5 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: ES 019A  
3 hours lecture/laboratory  
Further emphasis on individual physical conditioning, nutrition and weight control. Open to any student wishing to fulfill one semester of the exercise science activity requirement.  
UC credit limit, CSU

019C* ADVANCED PHYSICAL FITNESS 1.5 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: ES 019B  
3 hours lecture/laboratory  
Advanced skills and techniques of physical fitness. Emphasis on new concepts and techniques. Open to any student wishing to fulfill one semester of the exercise science activity requirement.  
UC credit limit, CSU

020* ADAPTED WEIGHT TRAINING 1-1.5 UNITS  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
2-3 hours lecture/laboratory  
Weight training class designed to meet the needs of those students who are either temporarily or permanently physically unable to participate in the regular physical education program. Emphasis on an individual program based on the student's limitations and needs. Exercises for general strengthening, body maintenance, relaxation, joint mobility, cardiovascular training, coordination, balance and personal health care planning may be included. Offered as Credit/No Credit only.  
UC credit limit, CSU

055A BEGINNING BASKETBALL LEAGUE STRATEGIES: PRE-COLLEGIATE 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
2 hours lecture/laboratory  
Instruction and practice in basic basketball team play which includes offense, defense and transition in a full court basketball league. Emphasizes learning about high school basketball. Offered as Credit/No Credit only. Non-associate degree applicable.

055B INTERMEDIATE BASKETBALL LEAGUE STRATEGIES: PRE-COLLEGIATE 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
2 hours lecture/laboratory  
Continuation of ES 055A with emphasis on intermediate basketball team play which includes offense, defense and transition in a full court basketball league. Emphasizes learning about high school basketball. Offered as Credit/No Credit only. Non-associate degree applicable.

055C ADVANCED BASKETBALL LEAGUE STRATEGIES: PRE-COLLEGIATE 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
2 hours lecture/laboratory  
Continuation of ES 055B with emphasis on advanced basketball team play which includes offense, defense and transition in a full court basketball league. Emphasizes learning about high school basketball. Offered as Credit/No Credit only. Non-associate degree applicable.

060A* BEGINNING BADMINTON 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
2 hours lecture/laboratory  
Presentation of the official singles and doubles games including the six basic strokes, footwork, strategy and etiquette.  
UC credit limit, CSU

060B* INTERMEDIATE BADMINTON 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
2 hours lecture/laboratory  
Continuation of ES 060A with emphasis on playing strategy and match play in singles and doubles.  
UC credit limit, CSU

060C* ADVANCED BADMINTON 1 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: ES 060B  
2 hours lecture/laboratory  
Advanced playing techniques, strategy, knowledge and attitudes for students who wish to excel in badminton and increase aerobic capacity.  
UC credit limit, CSU
076A* BEGINNING TENNIS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Presentation of the official singles and doubles games including basic strokes, rules, strategy and etiquette.
UC credit limit, CSU

076B* INTERMEDIATE TENNIS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 076A
2 hours lecture/laboratory
Continuation of ES 076A with emphasis on individual stroke analysis, playing strategy and match play, singles and doubles.
UC credit limit, CSU

076C* ADVANCED TENNIS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 076B
2 hours lecture/laboratory
Continuation of ES 076B with emphasis on advanced techniques, strategy and match play for singles, doubles and mixed doubles.
UC credit limit, CSU

080A* MODERN DANCE I 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Dance as an artistic expression. Beginning modern dance technique using an eclectic approach. Movement fundamentals including torso, legs and other parts of the body. Floor exercises, fall and recovery sequences, locomotion progressing from basic to variations. Short dance sequences using pure movement. Basic knowledge of the history of modern dance and its place in the world of dance. Beginning vocabulary of modern dance.
UC, CSU

080B* MODERN DANCE II 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 080A
3 hours lecture/laboratory
Continuation of ES 080A. Modern dance technique using an eclectic approach. Center exercises of the torso using various movement qualities: stretches, contractions and releases; movements of the feet, legs and combinations; floor exercises; fall and recoveries; locomotor movement patterns. Dances using various themes. Review of the history of modern dance. The leading exponents of modern dance in the United States.
UC, CSU

080C* MODERN DANCE III 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 080B
3 hours lecture/laboratory
Dance as an art form. More advanced dance skills using the torso in combination with stretches, swings, contractions and releases. Longer combinations at center involving the feet and legs. Floor and recovery sequences combined with floor work and balances. Movement patterns based on spatial design and rhythms. Dances based on different ideas and set to music. Knowledge of the work of leading modern dance companies, choreographers and dancers, locally and nationally.
UC, CSU

080D* MODERN DANCE IV 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 080C
3 hours lecture/laboratory
Dance as an art form. Advanced dance skills using the theories of Doris Humphrey, Jose Limon, Martha Graham and others well-known in the modern dance field. Dance technique using an eclectic approach. Choreographed dances based on set themes and using different forms of accompaniment. Knowledge of the work of leading modern dance companies and their choreographers.
UC, CSU

084A* JAZZ DANCE I 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction at the beginning level.
UC, CSU

084B* JAZZ DANCE II 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 084A
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction at the intermediate level.
UC, CSU
084C* JAZZ DANCE III 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 084B
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction at the intermediate/advanced levels.
UC, CSU

084D* JAZZ DANCE IV 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 084C
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction at the advanced level.
UC, CSU

088A* BALLET I 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout," positions of feet and legs, alignment of spine and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction at the beginning level.
UC, CSU

088B* BALLET II 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 088A
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout," positions of feet and legs, alignment of spine and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction at the intermediate level.
UC, CSU

088C* BALLET III 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 088B
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout," positions of feet and legs, alignment of spine and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction at the intermediate/advanced levels.
UC, CSU

088D* BALLET IV 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 088C
3 hours lecture/laboratory
Designed to introduce and develop movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout," positions of feet and legs, alignment of spine and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction at the advanced level.
UC, CSU

125A* BEGINNING GOLF 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Instruction and practice in basic golf skills. Instruction in course conduct, rules and self-evaluation of skills is emphasized. Practice limited to development of swing, stance and grip.
UC credit limit, CSU

125B* INTERMEDIATE GOLF 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 125A
2 hours lecture/laboratory
Instruction and practice in golf requiring skills to play small executive course. Students must furnish their own equipment.
UC credit limit, CSU

125C* ADVANCED GOLF 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 125B
2 hours lecture/laboratory
Continuation of ES 125B with emphasis on advanced techniques, strategies and tournament play in the game of golf. Students must furnish their own equipment.
UC credit limit, CSU
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Lecture/Laboratory</th>
<th>Description</th>
<th>Credit Limit</th>
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</thead>
<tbody>
<tr>
<td>150*</td>
<td>ADAPTED SPORTS EDUCATION</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2 hours</td>
<td>For physically challenged individuals in various sports and physical activities including track and field, basketball, football, weight training and golf. Students will also learn the fundamental principles of physical fitness and its impact on lifelong health and wellness.</td>
<td>CSU</td>
</tr>
<tr>
<td>155A*</td>
<td>BEGINNING BASKETBALL</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2 hours</td>
<td>Instruction and practice in the basic skills of basketball with emphasis on individual skill development and team play. Students will also learn the fundamental principles of physical fitness and its impact on lifelong health and wellness.</td>
<td>CSU</td>
</tr>
<tr>
<td>155B*</td>
<td>INTERMEDIATE BASKETBALL</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>ES 155A</td>
<td>2 hours</td>
<td>Continuation of ES 155A with emphasis on intermediate level individual skill development, team play, defensive/ offensive tactics and team strategies. Students will also learn the fundamental principles of physical fitness and its impact on lifelong health and wellness.</td>
<td>CSU</td>
</tr>
<tr>
<td>155C*</td>
<td>ADVANCED BASKETBALL</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>ES 155B</td>
<td>2 hours</td>
<td>Continuation of ES 155B with emphasis on advanced level individual skill development, team play, defensive/ offensive tactics and team strategies. Students will also learn the fundamental principles of physical fitness and its impact on lifelong health and wellness.</td>
<td>CSU</td>
</tr>
<tr>
<td>170A*</td>
<td>BEGINNING SOCCER</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2 hours</td>
<td>Basic skills and strategy of soccer with emphasis on team play and individual skills.</td>
<td>CSU</td>
</tr>
<tr>
<td>170B*</td>
<td>INTERMEDIATE SOCCER</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>ES 170A</td>
<td>2 hours</td>
<td>Intermediate soccer skills and team play. Emphasizes techniques, team strategy, language and lore of the game of soccer.</td>
<td>CSU</td>
</tr>
<tr>
<td>170C*</td>
<td>ADVANCED SOCCER</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>ES 170B</td>
<td>2 hours</td>
<td>Emphasis on advanced individual soccer skills and team play.</td>
<td>CSU</td>
</tr>
<tr>
<td>171A*</td>
<td>BEGINNING SOFTBALL</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2 hours</td>
<td>Designed to acquaint students with the basic fundamentals of the game of softball. For individuals of all ages and fitness levels. Lifelong health and vigor through exercise and activities will be emphasized. Enjoyment of the game of softball, physical activity, safety and injury prevention will be promoted. Individual position skill will also be emphasized, as well as offense and defense strategies.</td>
<td>CSU</td>
</tr>
<tr>
<td>171B*</td>
<td>INTERMEDIATE SOFTBALL</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>ES 171A</td>
<td>2 hours</td>
<td>Designed to acquaint students with the basic fundamentals of the game of softball. For individuals of all ages and fitness levels. Lifelong health and vigor through exercise and activities will be emphasized. Enjoyment of the game of softball, physical activity, safety and injury prevention will be promoted. Individual position skill will also be emphasized, as well as offense and defense strategies.</td>
<td>CSU</td>
</tr>
<tr>
<td>171C*</td>
<td>ADVANCED SOFTBALL</td>
<td>1</td>
<td>None</td>
<td>None</td>
<td>ES 171B</td>
<td>2 hours</td>
<td>Designed to acquaint students with the basic fundamentals of the game of softball. For individuals of all ages and fitness levels. Lifelong health and vigor through exercise and activities will be emphasized. Enjoyment of the game of softball, physical activity, safety and injury prevention will be promoted. Individual position skill will also be emphasized, as well as offense and defense strategies.</td>
<td>CSU</td>
</tr>
</tbody>
</table>
175A* BEGINNING VOLLEYBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Competency development in the team sport of volleyball. Emphasizes individual techniques and team strategy.
UC credit limit, CSU

175B* INTERMEDIATE VOLLEYBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 175A
2 hours lecture/laboratory
Continuation of ES 175A with emphasis on advanced play and strategy and four-person teams.
UC credit limit, CSU

175C* ADVANCED VOLLEYBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: ES 175B
2 hours lecture/laboratory
Continuation of ES 175B with emphasis on advanced play and strategy and four-person teams.
UC credit limit, CSU

195* SELF DEFENSE FOR WOMEN 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Basic principles of practical personal protection for women, with emphasis on awareness and prevention of situations that may leave a person vulnerable to crime, especially rape. Physical, mental and verbal responses will be taught and practiced so that students may develop the confidence to stand up and defend themselves, if needed. Fundamental principles of physical fitness and its impact on lifelong health and wellness.
UC credit limit, CSU

199 SPECIAL STUDIES OR PROJECTS IN EXERCISE SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Exercise Science under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC credit limit, CSU

200* CONDITIONING AND INJURY PREVENTION FOR ATHLETICS 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture/laboratory
Emphasis on physical conditioning and mastery of the basic fundamentals of movement and skills necessary to reduce the risk of injury associated with athletic activity. Conditioning activities, running games and resistance exercises will be emphasized.
UC, CSU

206 INTERCOLLEGIATE BASKETBALL 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Intercollegiate competition in the sport of basketball. Instruction in specific skills, performance techniques and strategies, as well as daily practice, development of physical fitness, team travel and competition against other collegiate institutions. Open to all students who wish to compete at the intercollegiate level.
UC credit limit, CSU

207 ADVANCED TECHNIQUES AND STRATEGIES OF BASKETBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Instruction and practice in advanced techniques and strategies of basketball. Incorporates game experience to formulate an understanding of the different styles of play.
CSU

209 INTERCOLLEGIATE CROSS-COUNTRY 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Open to students with advanced cross-country skills who wish to compete at the intercollegiate level.
UC credit limit, CSU

213 INTERCOLLEGIATE GOLF 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Instruction in team play and strategy. Competition in practice and league play.
UC credit limit, CSU
218 INTERCOLLEGIATE SOCCER  2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Open to students with advanced soccer skills who wish to compete at the intercollegiate level.
UC credit limit, CSU

219 ADVANCED TECHNIQUES AND STRATEGIES OF SOCCER  1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Designed for students with advanced soccer skills. Instruction and practice in the advanced techniques and strategies of soccer. Incorporates game experience to formulate an understanding of the different styles of play.
CSU

224 INTERCOLLEGIATE TENNIS  2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Intercollegiate competition in the sport of tennis. Instruction in specific skills, performance techniques and strategies, as well as daily practice, development of physical fitness, team travel and competition against other collegiate institutions. Open to all students who wish to compete at the intercollegiate level.
UC credit limit, CSU

225 ADVANCED TECHNIQUES AND STRATEGIES OF TENNIS  1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Designed for advanced tennis players who are proficient in the fundamental skills and have knowledge of the basic rules of the game. Instruction is geared toward advanced techniques, strategies and team play.
CSU

227 INTERCOLLEGIATE TRACK  2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Emphasis on advanced track skills for those who wish to compete at the intercollegiate level.
UC credit limit, CSU

230 INTERCOLLEGIATE VOLLEYBALL  2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
10 hours lecture/laboratory
Intercollegiate competition in the sport of volleyball. Instruction in specific skills, performance techniques and strategies, as well as daily practice, development of physical fitness, team travel and competition against other collegiate institutions. Open to all students who wish to compete at the intercollegiate level.
UC credit limit, CSU

231 ADVANCED TECHNIQUES AND STRATEGIES OF VOLLEYBALL  1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture/laboratory
Designed for advanced volleyball players who are proficient in the fundamental skills and have knowledge of the basic rules of the game. Instruction is geared toward advanced techniques, strategies and team play.
CSU

250 INTRODUCTION TO PHYSICAL EDUCATION  2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture
History, philosophy and principles of physical education and exercise science. Study of the aims and objectives of modern physical education with emphasis on the development of basic philosophy and background for professional education.
CSU

253 PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture, 1.5 hours laboratory
The statewide program in physical education for elementary schools forms the basis for this course. Includes the study of child development, personality development, analysis and practice of fundamental skills, selection of activities, organizational materials and evaluation of teaching ability.
CSU
254 PRINCIPLES OF PERSONAL TRAINING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Identification and study of the techniques, responsibilities and skills necessary to perform the duties of a personal trainer. Emphasizes current knowledge of health principles as it pertains to fitness and wellness. Provides the necessary information to pass the Personal Trainer Certification Exams for national certifying organizations (ACE, NSCA, etc.). Hands-on lab training in the use of fitness equipment.

255 CARE AND PREVENTION OF ATHLETIC INJURIES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory
Designed to (1) provide a background for individuals interested in an athletic training career, (2) develop an understanding of athletic injuries in terms of prevention, recognition, evaluation, treatment, first aid and emergency care for coaches and/or teachers in athletic settings, and (3) provide athletes with an understanding of how to manage their own injuries and methods of prevention.

COMM 258 COMMUNICATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the study of human communication. Focuses on the process of communication, communication skills, and the development of effective speaking and listening skills.

298 SELECTED TOPICS IN EXERCISE SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Exercise Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN EXERCISE SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Exercise Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. UC credit limit, CSU

FRENCH

120 FRENCH I 5 UNITS
(CAN FREN 2; CAN FREN SEQ A = FREN 120+121)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture
Interactive introduction to speaking, reading and writing French in a cultural context. Essential language structures for communication at the novice level.
UC, CSU, AA/AS GE, IGETC, CSU GE

121 FRENCH II 5 UNITS
(CAN FREN 4; CAN FREN SEQ A = FREN 120+121)
Prerequisite: FREN 120 or two years of high school French. Students with three years of high school French should enroll in FREN 220.
Corequisite: None
Recommended Preparation: None
5 hours lecture
Continuation of FREN 120. Continues to develop oral and written skills based on practical everyday needs.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN FRENCH 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of French under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

220 FRENCH III 5 UNITS
(CAN FREN 8; CAN FREN SEQ B = FREN 220+221)
Prerequisite: FREN 121 or three years of high school French. Students with four years of high school French should enroll in FREN 221.
Corequisite: None
Recommended Preparation: None
5 hours lecture
Continuation of FREN 121. Continues to develop oral, reading, writing and listening skills in order to acquire proficiency in French.
UC, CSU, AA/AS GE, IGETC, CSU GE

221 FRENCH IV 5 UNITS
(CAN FREN 10; CAN FREN SEQ B = FREN 220+221)
Prerequisite: FREN 220 or four years of high school French or equivalent
Corequisite: None
Recommended Preparation: None
5 hours lecture
Continuation of FREN 220. Continues to develop oral, reading, writing and listening skills in order to improve proficiency in French.
UC, CSU, AA/AS GE, IGETC, CSU GE
250 CONVERSATIONAL FRENCH 3 UNITS
Prerequisite: FREN 121 or four years of high school French or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Continues to develop oral, reading, writing and listening skills with emphasis on oral proficiency.
UC, CSU, AA/AS GE, IGETC, CSU GE

251 CONVERSATIONAL FRENCH 3 UNITS
Prerequisite: FREN 250 or 121 or four years of high school French or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Continues to develop oral, reading, writing and listening skills with emphasis on oral proficiency.
UC, CSU, AA/AS GE, IGETC, CSU GE

298 SELECTED TOPICS IN FRENCH 1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in French not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
UC, CSU

120 ELEMENTS OF PHYSICAL GEOGRAPHY 3 UNITS
(CAN GEOG 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the fundamental nature and dynamics of the physical world. Special attention given to the interactions within and between the major components of the atmosphere, hydrosphere, lithosphere and biosphere. Topics investigated on a global, regional and local scale include: Earth-Sun relations; weather and climate; soil and vegetation patterns; plate tectonics; volcanic and earthquake related processes; weathering, erosion and mass wasting; analyses of mountain, desert and coastal environments. Global, regional and local environmental concerns will be integrated into topic discussions throughout the course. Local field trips link course materials to real-world phenomena.
UC, CSU, AA/AS GE, IGETC, CSU GE

299 SELECTED TOPICS IN FRENCH 1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in French not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU

121 PHYSICAL GEOGRAPHY LABORATORY 1 UNIT
Prerequisite: GEOG 120 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Augments the physical geography lecture course through practical applications of materials covered in GEOG 120. Laboratory exercises include practical applications of the following: map analysis and interpretation; Earth-Sun relations; weather and climate; basic rock and mineral identification; plate tectonics; erosional and depositional environments; landform identification and genesis; soil and vegetation distributions. Special attention given to the unique local setting of San Diego County. Field experience incorporated into laboratory exercises on a regular basis.
UC, CSU, AA/AS GE, IGETC, CSU GE

122 REGIONAL FIELD STUDIES IN PHYSICAL GEOGRAPHY 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: GEOG 120 or concurrent enrollment
1 hour lecture, 1 hour laboratory
Designed to provide focused experience in geographical field studies of a selected region in western North America. Emphasizes observation and interpretation of physical geography phenomena through direct experience in a field setting. Requires a multi-day field trip as well as on-campus meetings prior to and immediately following the field trip. Students must supply their own camping gear including food, cooking gear, stove, eating utensils, sleeping bag and tent. May be repeated up to 4 times with different content for a maximum of 4 units.
CSU
130 HUMAN AND CULTURAL GEOGRAPHY 3 UNITS
(CAN GEOG 4)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the study of the dynamics and complex relationships between the Earth's people and the ever-changing world in which they live. Special attention given to the historical role of the human-environment relationship, as well as the influences of language, religion, and other cultural factors in shaping the world's many cultures. Topics investigated on a global, regional and local scale include: origin and diffusion of the world's major languages and religions; population and settlement patterns; political and economic systems; methods of livelihood; the role of technology in our rapidly changing world. Emphasis on human-environment relations and understanding and appreciation of our diverse multicultural world. Local field trips link course materials to real-world phenomena.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN GEOGRAPHY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Geography under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298 SELECTED TOPICS IN GEOGRAPHY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Geography not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
UC, CSU

299 SELECTED TOPICS IN GEOGRAPHY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Geography not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU

GEOLOGY

110 GENERAL GEOLOGY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the fundamental nature of the physical Earth and its interior. Special attention given to the role of plate tectonics in shaping the Earth's surface. Topics investigated on a global, regional and local scale include: Earth's internal and external structure; rock and mineral composition and identification; geologic time; plate tectonics; volcanism and earthquakes; weathering, erosion and mass wasting; mineral and energy resources. Local field trips link course materials to real-world phenomena.
UC, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN GEOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Geology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298 SELECTED TOPICS IN GEOLOGY 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Geology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
UC

299 SELECTED TOPICS IN GEOLOGY 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Geology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC
105 FUNDAMENTALS OF DIGITAL MEDIA  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Investigates the digital hardware and software used in fine art and graphic design. Learn how to direct the computer operating system, file management, information storage and software applications as well as how to explore the creative potential and practical aspects of digital media. Topics include file formats, scanning, digital cameras, raster and vector graphics, typography, page layout, printing and utilizing the Web.
CSU

110 BEGINNING GRAPHIC DESIGN  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Explores the fundamental concepts that make graphic design a form of artistic expression and a vital part of our contemporary society. Basic concepts of design and production are examined using creative problem-solving skills with text and images and emphasizing traditional media. Students investigate the range of career options and begin the development of a professional portfolio.
CSU

125 TYPOGRAPHY  3 UNITS
Prerequisite: GD 105, ART 120 with a grade of “C” or better
Corequisite: None
Recommended Preparation: GD 110
2 hours lecture, 4 hours laboratory
Explores the fundamental nature of typography as a reflection of society. Letters and numbers are examined as art forms and as carriers of language and ideas. Technical aspects of typography will be considered including function and production. Design letter forms using both traditional and digital processes with an emphasis on developing a professional portfolio.
CSU

126 DIGITAL IMAGING  3 UNITS
ABCD
Prerequisite: GD 105 with a grade of “C” or better
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Explores capturing images with film, scanners and digital cameras. Images will be creatively edited with raster graphic software to meet both aesthetic and professional needs. Applicable for both fine art and graphic design.
CSU

129 PAGE LAYOUT  3 UNITS
Prerequisite: GD 105, 110 with a grade of “C” or better
Corequisite: None
Recommended Preparation: GD 125
2 hours lecture, 4 hours laboratory
Emphasizes the aesthetic and functional organization of text, charts, graphs, line art, illustrations and photos in multiple page documents. Use traditional and digital processes to develop creative thumbnails, roughs and comprehensive layouts. Emphasis on preparing text and images for electronic pre-press and for selecting printing options. Students will develop work for a professional portfolio.
CSU

130 PROFESSIONAL BUSINESS PRACTICES  3 UNITS
Prerequisite: GD 129 with a grade of “C” or better
Corequisite: None
Recommended Preparation: None
2 hours lecture, 4 hours laboratory
Emphasizes professional business practices used in the graphic design industry including design studios, agencies and self-employment. Learn how to create a resume, market a portfolio, acquire clients and set fees. Students will refine their design capabilities using text and images, while learning how to perform as business professionals. Students must pass the Department Portfolio Review to receive credit for this class.
CSU

199 SPECIAL STUDIES OR PROJECTS IN GRAPHIC DESIGN  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Graphic Design under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
CSU

225 DIGITAL ILLUSTRATION  3 UNITS
ABCD
Prerequisite: GD 105 with a grade of “C” or better
Corequisite: None
Recommended Preparation: ART 124, 230
2 hours lecture, 4 hours laboratory
Uses vector and paint software to create drawings and paintings using line, texture, value and color and applies aesthetics and computer technology to making exciting and aesthetic graphic images. Applicable for both fine art and graphic design.
CSU
230 GRAPHIC DESIGN INTERNSHIP 1-4 UNITS
Prerequisite: GD 129 with a grade of "C" or better
Corequisite: None
Recommended Preparation: None
75 hours paid or 60 hours unpaid work experience per unit
Provides field experience in design, business procedures, client relationships and supervision of work executed for practicing professionals and design-related firms. Student is responsible for finding an employer. Assessment of student is performed by instructor based on recommendations of supervisor at place of employment. Work experience must be started and completed during the semester that units are earned. Offered as Credit/No Credit only.

298 SELECTED TOPICS IN GRAPHIC DESIGN 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Graphic Design not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only, Non-associate degree applicable.

299 SELECTED TOPICS IN GRAPHIC DESIGN 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Graphic Design not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

HEALTH EDUCATION

110 ESSENTIALS OF PERSONAL AND COMMUNITY HEALTH 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Identification and study of the major health problems in today’s society. Emphasizes individual responsibility for personal health and the promotion of informed, positive health behaviors. Content areas include nutrition and weight control, substance abuse, environmental hazards, diseases and safety. UC, CSU, AA/AS GE, CSU GE

155 REALITIES OF NUTRITION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the basic principles of nutrition and its relationship to good health. Evaluation of current nutritional information (and misinformation) with emphasis on critical thinking to determine optimal dietary choices. Study of the major dietary goals and guidelines. Examination of weight maintenance techniques, eating disorders, food labeling, food safety, and special needs at various stages in the life cycle.

CSU

158 NUTRITION FOR ATHLETES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Investigates the effects of nutrition and various dietary regimens on athletic performance, physical fitness and general health. Students will compare the physiological effects of optimal nutrition vs. inadequate nutrition for the general population as well as athletes. Cultural, sociological and psychological influences will be examined. Discussion of “fads” and supplements will be included.

CSU

199 SPECIAL STUDIES OR PROJECTS IN HEALTH EDUCATION 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Health Education under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

CSU
251* HEALTHY LIFESTYLES: THEORY AND APPLICATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Combination of physical activity and lecture provides regular exercise to develop physical fitness and information about basic, sound nutrition as it pertains to weight control. Guidelines that promote lifetime exercise and a healthy lifestyle will be emphasized. Reports, journals and tests will be required.
CSU, CSU GE

298 SELECTED TOPICS IN HEALTH EDUCATION 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Health Education not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN HEALTH EDUCATION 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Health Education not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
CSU

* Meets the activity requirement for graduation.

100 EARLY WORLD HISTORY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Early World History defines ancient interconnections between diverse world societies that grew, except in rare cases, without extended contact with one another: Mesopotamia, Egypt, China, India, the Classical West, Civilizations of Africa, Civilizations of the Americas and Oceana. Cultural overview to early modern times is included.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

101 MODERN WORLD HISTORY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Modern World History explores the background and development of the global society from early modern times to the present. Emphasizes cultural, imperial and industrial interconnections between societies, both western and non-western.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

105 EARLY WESTERN CIVILIZATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Broad survey of the evolution of the West from the Prehistoric Era to the Early Modern Period. Stresses trends and relationships affecting the various aspects of Western Civilization such as politics, economics, society and culture. Particular emphasis on cause and effect in history.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

106 MODERN WESTERN CIVILIZATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
History of Western Civilization from early modern times to the present. Continuation of HIST 105, from 1600 to the present.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

108* EARLY AMERICAN HISTORY 3 UNITS
(CAN HIST 8; CAN HIST SEQ B = HIST 108+109)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Survey of the political, social and cultural development of the early United States with emphasis on the origins of the basic American institutions and ideals, from European contact to Reconstruction.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Credits</th>
<th>Lecture Hours</th>
<th>Description</th>
<th>GE Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>109*</td>
<td>MODERN AMERICAN HISTORY</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Survey of the political, social and cultural development of the modern United States, with emphasis on the economic, social and technological changes and the rise of the United States as a world power.</td>
</tr>
<tr>
<td>114</td>
<td>COMPARATIVE HISTORY OF THE EARLY AMERICAS</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Covers the western hemisphere from ancient times to independence (2000 B.C. to the 1820’s). Concentration on the native, European and African contributions to the development of societies in this region during the colonial period.</td>
</tr>
<tr>
<td>115</td>
<td>COMPARATIVE HISTORY OF THE MODERN AMERICAS</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Covers the western hemisphere from independence in the 1780’s to the present. Focuses on the social, political and economic transformations of these regions in their efforts at nation building.</td>
</tr>
<tr>
<td>118*</td>
<td>U.S. HISTORY: THE CHICANO EXPERIENCE I</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Historical survey of the Chicano people in the United States in which attention is given to social, political and economic background. Particular emphasis on the development of the Spanish-speaking peoples' economic, social and political experience in the United States, especially in the Southwest from the Indo-Hispanic period to the Mexican-American War.</td>
</tr>
<tr>
<td>119*</td>
<td>U.S. HISTORY: THE CHICANO EXPERIENCE II</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Historical survey of the Chicano people in the United States in which attention is given to social, political and economic background. Particular emphasis on the development of the Spanish-speaking peoples' economic, social and political experience in the United States, especially in the Southwest from the Mexican-American War to the present.</td>
</tr>
<tr>
<td>122*</td>
<td>WOMEN IN EARLY AMERICAN HISTORY</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Covers the social, political, cultural, economic and intellectual development of women in America from pre-contact to 1877.</td>
</tr>
<tr>
<td>123*</td>
<td>WOMEN IN MODERN AMERICAN HISTORY</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Covers the social, political, cultural, economic and intellectual development of women in America from 1877 to the present.</td>
</tr>
<tr>
<td>124</td>
<td>HISTORY OF CALIFORNIA</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Survey of political, social and economic development of the State of California from the earliest Spanish explorations and settlements to the present. Unit of study in California state and local government included.</td>
</tr>
<tr>
<td>130*</td>
<td>U.S. HISTORY AND CULTURE I: NATIVE AMERICAN PERSPECTIVES</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
<td>3</td>
<td></td>
<td>Historical survey of the indigenous people throughout the North American Continent from the earliest recorded knowledge to 1850. Attention given to Indian perspectives of native and non-native cultures. The influence of American Indians on the Federal Constitution and the political philosophies of Early Americans will be studied. Indian political organization and its parallels and differences in Early American political organizations and philosophies are studied. Particular attention given to legislation and its impact on Indian culture and society.</td>
</tr>
</tbody>
</table>
131* U.S. HISTORY AND CULTURE II: NATIVE AMERICAN PERSPECTIVES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Historical survey of the indigenous people of the North American Continent from 1850 to the present. Attention given to contemporary, historical, political, and socio-economic issues affecting the American Indian, nationwide, statewide and locally. Indian perspectives of native and non-native cultures will be included. The Federal and State Constitutions are studied with special emphasis on the effects on and influence of the Indian culture and society. Particular attention given to political philosophies and the impact of legislation on Indian culture and society.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

150* U.S. HISTORY: THE ASIAN-AMERICAN EXPERIENCE I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introductory comparative analysis of the Asian-American experience from 1848 to World War II. Topics include: the origins of the United States Constitution and the political philosophy of its framers; an analysis of the Asian-American perspective; cultural roots, immigration and settlement patterns; labor, legal, political and social history. Emphasis on Chinese-Americans, Japanese-Americans, Filipino-Americans and other groups.
UC, CSU, AA/AS GE, IGETC, CSU GE

151* U.S. HISTORY: THE ASIAN-AMERICAN EXPERIENCE II 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introductory comparative analysis of the Asian-American experience from World War II to the present. Topics include: analysis of the Asian-American perspective; cultural roots, immigration, and settlement patterns; labor, legal, political and social history. Emphasis on Chinese-Americans, Japanese-Americans, Filipino-Americans, and recent immigrant groups from Korea and Southeast Asia.
UC, CSU, AA/AS GE, IGETC, CSU GE

180* U.S. HISTORY: BLACK PERSPECTIVES I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
United States history with emphasis on social, economic, political and cultural experiences of Black people. Traces the development of African-Americans from Africa through the period of Reconstruction.
UC, CSU, AA/AS GE, IGETC, CSU GE

181* U.S. HISTORY: BLACK PERSPECTIVES II 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Examination of significant aspects of United States history from the aftermath of the Civil War to the present. Emphasis on the socio-economic, political and cultural experience of African-Americans in the United States from Reconstruction to the present.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN HISTORY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of History under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

210 WOMEN IN WESTERN CIVILIZATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Social, cultural, economic, political and ideological aspects of women in western society from ancient times to the present.
UC, CSU

275 HISTORICAL PERIOD 3 UNITS
276 GEOGRAPHICAL AREA 3 UNITS
277 HISTORICAL THEME 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
In-depth study of a historical period (275), geographical area (276), or historical theme (277). Reading, discussion, lecture and instructional media focused on the forces contributing to the creation of the material studied and on the place of that material in relation to other disciplines in the humanities.
UC, CSU, AA/AS GE, IGETC, CSU GE

298 SELECTED TOPICS IN HISTORY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in History not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.
299  SELECTED TOPICS IN HISTORY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in History not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU

*Meets part of the American Institutions requirement. See "Transfer" section under CSU General Education Breadth for complete requirements.

110  PRINCIPLES OF THE HUMANITIES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
In this basic interdisciplinary humanities course, students learn how to examine, compare, analyze, evaluate, interpret and discuss creative works within their cultural contexts. Examples for study will be selected from the world’s great works of literature, drama, painting, sculpture, architecture, music, etc.
UC, CSU, AA/AS GE, IGETC, CSU GE

120  EUROPEAN HUMANITIES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Integrated approach to European cultural values as expressed in representative masterpieces of literature, philosophy, drama, music, visual art and architecture.
UC, CSU, AA/AS GE, CSU GE

140  AMERICAN HUMANITIES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Integrated study of American forms of art and thought including popular forms such as film, jazz and popular music. Various periods in American history will be examined from a cultural viewpoint, and selections will be chosen which are most representative of the forms of consciousness during those periods.
UC, CSU, AA/AS GE, IGETC, CSU GE

155  MYTHOLOGY  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Exploration of myths, legends, folklore and fairy tales as a means of understanding the way different people throughout the world have viewed themselves, their heroes, gods and supernatural beings and the world they live in. Emphasis on the symbolic meaning of the stories covered and the light they shed on our common human nature.
UC, CSU, AA/AS GE, IGETC, CSU GE
### SPECIAL STUDIES OR PROJECTS IN HUMANITIES  1-3 UNITS

Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
3-9 hours  
Individual study, research or projects in the field of Humanities under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.  
UC, CSU

### SELECTED TOPICS IN HUMANITIES  1-3 UNITS

Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
1-9 hours  
Selected topics in Humanities not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

### MANUFACTURING MATERIALS AND PROCESSES  3 UNITS

Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Integrated study of material properties and their relationship to manufacturing processes in current industrial practice. Methods and equipment including machine tools, forging, chemical milling, casting, welding, adhesives, powder metallurgy and high energy forming practice. Finishing processes including heat treatment, grinding, plating, degreasing and organic finishing materials. Introduction to layout, gaging, inspection and numerical control.  
CSU

### METALS OF INDUSTRY  3 UNITS

Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Study of metals commonly found in manufacturing, ferrous and nonferrous metallurgy, effect of heat treatment, hot and cold working, extremes of temperature on physical properties, corrosion, fatigue. Emphasis on production problems.  
CSU

### HYDRAULIC AND PNEUMATIC SYSTEMS  3 UNITS

Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Theoretical and practical aspects of hydraulic and pneumatic control and force systems including pumps, automatic valves, tubing, rams, servo-valves, rates, pressure drops, static pressure, dynamic pressure, output characteristics of pumps, trouble-shooting and repair. Emphasis on practical application.  
CSU

### QUALITY CONTROL METHODS  3 UNITS

Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Methods of inspection including destructive and nondestructive testing such as hardness, toughness, tensile, shear, peel, dye penetrant, magnetic particle, radiographic, ultrasonic and eddy current. Also covers sampling techniques, gaging and metrology. Emphasis on current methods in use with field trips to examine actual plant operations.  
CSU
199 SPECIAL STUDIES OR PROJECTS IN INDUSTRIAL TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Industrial Technology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and Office of Instruction. May be repeated for a maximum of 9 units.
CSU

298 SELECTED TOPICS IN INDUSTRIAL TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Industrial Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN INDUSTRIAL TECHNOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Industrial Technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
CSU

INTERDISCIPLINARY STUDIES

199 SPECIAL STUDIES OR PROJECTS IN INTERDISCIPLINARY STUDIES  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Interdisciplinary Studies under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Interdisciplinary Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Interdisciplinary Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
## Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Prerequisites/Preparation</th>
<th>Lecture/Laboratory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>050</td>
<td>MATH SKILLS FOR LIFE AND THE WORKPLACE</td>
<td>2</td>
<td>None</td>
<td>1.5 hours</td>
<td>Concentrates on one or more of the following topics as needed: basic mathematics skills including basic operations with whole numbers, fractions, decimals, percents; basic geometry; basic statistics; and consumer math. Also emphasizes the use of computer applications to learn basic math concepts. Calculator skills will be developed as an aid in problem solving. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
</tr>
<tr>
<td>088</td>
<td>BASIC MATHEMATICS</td>
<td>4</td>
<td>None</td>
<td>4 hours</td>
<td>Review of the fundamentals of arithmetic including addition, subtraction, multiplication and division with emphasis on mental arithmetic. Operations with fractions, decimals and percents are also emphasized. The derivation and use of selected measurement concepts and the development of pre-algebra ideas such as variable, signed numbers and equations are included. Area and volume formulas for fundamental shapes are stressed. These topics are explored in the context of problem solving and appropriate calculator use. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
</tr>
<tr>
<td>090</td>
<td>ELEMENTARY ALGEBRA</td>
<td>5</td>
<td>None</td>
<td>5 hours</td>
<td>Emphasizes mathematical reasoning, problem solving, and real-world applications using numerical, algebraic and graphical models. Topics include problem-solving techniques, algebraic expressions, polynomials, linear and quadratic equations, linear inequalities, linear and nonlinear graphs, systems of linear equations in two variables, integer exponents, proportions, and radicals. Selection and application of appropriate graphing utility and/or computer program to interpret, model and analyze data, graphs and/or application problems. Optional use of graphing calculator. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
</tr>
<tr>
<td>097</td>
<td>PLANE GEOMETRY</td>
<td>3</td>
<td>Credit in MATH 090 or equivalent</td>
<td>3 hours</td>
<td>Introduces essential vocabulary, properties and characteristics of geometric objects and geometric constructions. The concepts of plane geometry are developed inductively and then deductively. Computer-facilitated instruction offers a dynamic presentation of geometric concepts. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
</tr>
<tr>
<td>098</td>
<td>INTRODUCTION TO GRAPHING CALCULATORS</td>
<td>1</td>
<td>Credit in MATH 090 or equivalent</td>
<td>1 hour</td>
<td>For students who wish to acquire skills in using graphing calculators. Calculator uses will include, but are not limited to: arithmetic operations, equations, inequalities, graphing and basic statistics. Hands-on approach will be employed. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
</tr>
<tr>
<td>103</td>
<td>INTERMEDIATE ALGEBRA</td>
<td>3</td>
<td>Credit in MATH 090 or equivalent</td>
<td>3 hours</td>
<td>Graphic, numeric, analytic and applied problems on topics including linear, quadratic, exponential and logarithmic functions, exponents and radicals. Selection and application of appropriate graphing utility and/or computer program to interpret, model and analyze data, graphs and/or application problems. Additional topics include systems of equations, algebraic fractions, radicals, equations involving inequalities and absolute value, and complex numbers. Maximum of 5 units can be earned for taking MATH 103 and 110. AA/AS GE</td>
</tr>
</tbody>
</table>
110  INTERMEDIATE ALGEBRA FOR BUSINESS, MATHEMATICS, SCIENCE AND ENGINEERING  5 UNITS
Prerequisite: Credit in MATH 090 or equivalent
Corequisite: None
Recommended Preparation: None
5 hours lecture, 1 hour laboratory
Application of graphic, numeric and analytic methods to model, interpret and solve real-world problems involving: linear, quadratic, rational, radical, exponential and logarithmic functions; systems of linear and quadratic equations or inequalities; and absolute value equations or inequalities. Selection and application of appropriate graphing utility and/or computer program to interpret, model and analyze a collection of data and/or application problems. Additional topics include conic sections and an introduction to matrices and determinants. Computational techniques developed in beginning algebra are prerequisite skills for this course. Appropriate for students with knowledge of beginning algebra or who have had at least two years of high school algebra but have not used it for several years. Maximum of five 5 units can be earned for taking MATH 103 and 110.
AA/AS GE

120  MATHEMATICS FOR GENERAL EDUCATION  3 UNITS
(CAN MATH 2)
Prerequisite: MATH 103 or 110 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Topics from logic, modern algebra, set theory, probability, statistics and computer math designed to give students a very brief introduction to the structure of mathematical theories and their application. General education course in mathematics.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

125  STRUCTURE AND CONCEPTS OF ELEMENTARY MATHEMATICS I  3 UNITS
Prerequisite: MATH 103 or 110 and MATH 097 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
In blending the mathematical topics of sets, whole numbers, numeration, number theory, integers, geometry, computer literacy, relations, functions and logic, the course will investigate the interrelationships of these topics using a problem-solving approach.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

126  STRUCTURE AND CONCEPTS OF ELEMENTARY MATHEMATICS II  3 UNITS
Prerequisite: MATH 125 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
In blending the mathematical topics of rationals and reals, statistics, probability, measurement, coordinate geometry, logic, relations, functions and computer literacy, the course will investigate the interrelationships of these topics using a problem-solving approach.
UC credit limit, CSU, IGETC, CSU GE

160  ELEMENTARY STATISTICS  3 UNITS
(CAN STAT 2)
Prerequisite: MATH 103 or 110 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory
Study and application of the concepts and procedures of descriptive statistics, probability theory, and inferential statistics. In descriptive statistics: organize, summarize and display data including frequency tables and histograms; exploratory data analysis; and measures of central tendency, variation and position. In probability theory: fundamental rules and definitions of probability; counting; central limit theorem; and probability distributions including the binomial, normal, Student T, chi-square, and F. In inferential statistics: estimation and hypothesis testing for means, proportions and variances; contingency tables; ANOVA models; linear regression and correlation; and nonparametric methods. Applications may be included from various fields such as biology, business, economics, education, engineering, demography and psychology.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

170  ANALYTIC TRIGONOMETRY  3 UNITS
(CAN MATH 8)
Prerequisite: MATH 110 and 097 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Theoretical approach to the study of the trigonometric functions with emphasis on circular functions, trigonometric identities, trigonometric equations, graphical methods, vectors and applications, complex numbers and solving triangles with applications.
CSU, AA/AS GE, CSU GE
175  COLLEGE ALGEBRA  3 UNITS  
(CAN MATH 10)  
Prerequisite: MATH 110 with a grade of "C" or better or equivalent (MATH 103 does not meet the prerequisite)  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Graphic, numeric and analytic approaches to the study of precalculus concepts from college algebra. Application of appropriate technology including but not limited to graphing utilities to model, analyze, and interpret a collection of data or to solve real-world application problems from a variety of disciplines. Topics include: the real number system; algebraic, exponential, and logarithmic functions and their inverses; graphing techniques for polynomial and rational functions; complex numbers; theory of equations; partial fractions; mathematical induction; sequences and series; matrices; and the binomial theorem. Maximum of 6 units can be earned for successfully completing any combination of MATH 170, 175 and 176.  
UC, CSU, AA/AS GE, IGETC, CSU GE

176  PRECALCULUS: FUNCTIONS AND GRAPHS  6 UNITS  
Prerequisite: MATH 110 and 097 with a grade of "C" or better or equivalent (MATH 103 does not meet the prerequisite)  
Corequisite: None  
Recommended Preparation: None  
6 hours lecture  
Graphic, numeric and analytic approaches to the study of precalculus concepts from college algebra and analytic trigonometry. Application of appropriate technology including but not limited to graphing utilities to model, analyze and interpret a collection of data or to solve real-world application problems from a variety of disciplines. Topics include the real number system; algebraic, exponential, and logarithmic functions and their inverses; graphing techniques for polynomial, rational and trigonometric functions; complex numbers; theory of equations; trigonometric functions and their inverses with emphasis on the circular functions; trigonometric equations and identities; vectors; right and oblique triangles; partial fractions; polar coordinates; mathematical induction; sequences and series; matrices; the binomial theorem. Maximum of 6 units can be earned for successfully completing any combination of MATH 170, 175 and 176.  
UC credit limit, CSU, AA/AS GE, CSU GE

178  CALCULUS FOR BUSINESS, SOCIAL AND BEHAVIORAL SCIENCES  4 UNITS  
(CAN MATH 30)  
Prerequisite: MATH 110 with a grade of "C" or better or equivalent  
Corequisite: None  
Recommended Preparation: None  
4 hours lecture  
Concepts and applications of algebra and polynomial calculus. Designed for students in business, social sciences and behavioral sciences. Not open to students with credit in MATH 180.  
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

180  ANALYTIC GEOMETRY AND CALCULUS  5 UNITS  
(CAN MATH 18; CAN MATH SEQ B = MATH 180+280, CAN MATH SEQ C = MATH 180+280+281)  
Prerequisite: MATH 170 and 175 or 176 with a grade of "C" or better or equivalent  
Corequisite: None  
Recommended Preparation: None  
5 hours lecture  
Graphic, numeric and analytic approaches to the study of analytic geometry, limits and continuity of functions, and introductory differential and integral calculus. Applications involving analysis of algebraic, exponential, logarithmic, trigonometric and hyperbolic functions from a variety of disciplines including science, business, and engineering. First of three courses designed to provide serious science students with a solid introduction to the theory and techniques of analysis.  
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

198  SUPERVISED TUTORING  0 UNIT  
Prerequisite: None  
Corequisite: None  
Recommended Preparation: None  
TBA hours  
Uses a variety of educational tools to assist students with various learning needs. Can be used to strengthen prerequisite skills prior to enrolling in a specific course or to receive supplemental assistance while concurrently enrolled in another course. May be repeated with different content. No fee/no credit course.

199  SPECIAL STUDIES OR PROJECTS IN MATHEMATICS  1-3 UNITS  
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
3-9 hours  
Individual study, research or projects in the field of Mathematics under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.  
UC, CSU
245 DISCRETE MATHEMATICS 3 UNITS
Prerequisite: MATH 280 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to discrete mathematics. Includes basic logic, methods of proof, sequences, elementary number theory, basic set theory, elementary counting techniques, relations, and recurrence relations.
UC, CSU, AA/AS GE, IGETC, CSU GE

280 ANALYTIC GEOMETRY AND CALCULUS 4 UNITS
(CAN MATH 20; CAN MATH SEQ B = MATH 180+280, CAN MATH SEQ C = MATH 180+280+281)
Prerequisite: MATH 180 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
4 hours lecture
Continuation of MATH 180. Includes parametric equations, polar coordinates, hyperbolic functions, techniques of integration, indeterminant forms, infinite series and conics.
UC, CSU, AA/AS GE, IGETC, CSU GE

281 INTERMEDIATE CALCULUS 4 UNITS
(CAN MATH 22; CAN MATH SEQ C = MATH 180+280+281)
Prerequisite: MATH 280 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
4 hours lecture
Sequel to MATH 280. Includes vectors in two and three dimensions, partial differentiation, iterated integration, line and surface integrals, application of Green's and Stokes' theorems, work with cylindrical and spherical coordinates, and an introduction to linear algebra.
UC, CSU, AA/AS GE, IGETC, CSU GE

284 LINEAR ALGEBRA 3 UNITS
(CAN MATH 26)
Prerequisite: MATH 280 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Matrix operations, Gauss elimination, determinants, vector spaces, linear transformations, orthogonality, eigenvalues and eigenvectors.
UC, CSU, AA/AS GE, IGETC, CSU GE

285 DIFFERENTIAL EQUATIONS 3 UNITS
(CAN MATH 24)
Prerequisite: MATH 280 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture
Includes first order differential equations, initial boundary value problems, the Cauchy-Euler equation, series solutions, Laplace transformations, Fourier Series, and separation of variables for elementary partial differential equations. Applications of these topics will be explored.
UC, CSU, IGETC, CSU GE

298 SELECTED TOPICS IN MATHEMATICS 1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in Mathematics not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN MATHEMATICS 1-5 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours
Selected topics in Mathematics not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Hours Lecture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 101</td>
<td>Rudiments of Music and Musicianship</td>
<td>4</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>4</td>
<td>Basic elements of music. Notation and major and minor keys, triads and inversions, musical terms and analysis involving intervals and simple chord structures. Sight-singing and dictation of basic music materials. Some keyboard activity.</td>
</tr>
<tr>
<td>MUS 108-</td>
<td>Instrumental Music Ensemble</td>
<td>1</td>
<td>Audition</td>
<td>None</td>
<td>None</td>
<td>5</td>
<td>Study and performance of music literature for an ensemble of mixed instruments.</td>
</tr>
<tr>
<td>MUS 109</td>
<td>PIANO I</td>
<td>2</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2</td>
<td>Piano for non-music majors. Emphasis on reading staff notation, harmonization, improvisation and music fundamentals.</td>
</tr>
<tr>
<td>MUS 113</td>
<td>PIANO II</td>
<td>2</td>
<td>MUS 112 or by performance evaluation</td>
<td>None</td>
<td>None</td>
<td>2</td>
<td>Piano for non-music majors. Continuation of MUS 112 with emphasis on reading staff notation and playing rhythms at an intermediate level.</td>
</tr>
<tr>
<td>MUS 115</td>
<td>History of Rock Music</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Presents an overview of rock and rock-related musical styles from the early 1950’s to the present. Includes the interplay of social and cultural trends with the innovations and achievements of individual artists, the ongoing influence of technology on music, the cross-fertilization of African- and European-American popular music styles, and recurring cycles of rebellion against and assimilation by the popular music industry. In addition, basic musical concepts such as pitch, rhythm, and form will be introduced and applied to the music under consideration.</td>
</tr>
<tr>
<td>MUS 116</td>
<td>Introduction to World Music</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Designed to expand the student’s perspective about the nature of music around the world and demonstrate the relationship between music in different cultures. Highlights elements common to all music. May include music of the cultures of India, China, Japan, Indonesia, Africa, Pacific Islands, the Middle East, Europe and the Americas.</td>
</tr>
<tr>
<td>MUS 118</td>
<td>Introduction to Music</td>
<td>4</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>4</td>
<td>Study of basic music theory including notation, rhythms, scales, intervals, triads and sight-singing. Introduction to basic rhythm instruments and development of keyboard facility and vocal skill. Designed for preschool/elementary education majors and non-music majors.</td>
</tr>
<tr>
<td>MUS 126</td>
<td>Class Guitar I</td>
<td>2</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2</td>
<td>Beginning course in guitar for non-music majors. Fundamentals of music as related to the guitar including scales, chords, and reading staff notation.</td>
</tr>
</tbody>
</table>
127  CLASS GUITAR II  2 UNITS
Prerequisite: MUS 126 or by examination
Corequisite: None
Recommended Preparation: None
2 hours lecture
Guitar for non-music majors. Continuation of MUS 126 with emphasis on reading staff notation in closed positions, playing scales and chords in major and minor keys, and developing both left and right hand technique.
UC, CSU

156  JAZZ ENSEMBLE I  1 UNIT
Prerequisite: Audition; ability to play an appropriate jazz ensemble instrument.
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study of representative jazz ensemble compositions in a wide variety of styles at regular rehearsals and public performances.
UC, CSU

157  JAZZ ENSEMBLE II  1 UNIT
Prerequisite: Audition; ability to play an appropriate jazz ensemble instrument.
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study of representative jazz ensemble compositions in a wide variety of styles at regular rehearsals and public performances.
UC, CSU

158-  CHORUS  1 UNIT
159  Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study and performance of standard and contemporary choral literature for choral ensemble. Open to all singers in the community and students of the college.
CSU

170-  CLASS VOICE  2 UNITS
171  Prerequisite: None
Corequisite: None
Recommended Preparation: Ability to read music
2 hours lecture
Designed to help the student learn to use the voice correctly. Principles of vocal placement, posture, balance, breath control and vocal tone are emphasized through individual performances.

199  SPECIAL STUDIES OR PROJECTS IN MUSIC  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Music under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

208-  INSTRUMENTAL MUSIC ENSEMBLE  1 UNIT
209  Prerequisite: Audition
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study and performance of music literature for an ensemble of mixed instruments.
CSU

212  PIANO III  2 UNITS
Prerequisite: MUS 113 or by performance evaluation
Corequisite: None
Recommended Preparation: None
2 hours lecture
Piano for non-music majors. Continuation of MUS 113 with emphasis on intermediate level staff notation, piano technique, and musicianship.
UC, CSU

213  PIANO IV  2 UNITS
Prerequisite: MUS 212 or by performance evaluation
Corequisite: None
Recommended Preparation: None
2 hours lecture
Piano for non-music majors. Continuation of MUS 212 with emphasis on advanced staff notation, piano technique, and musicianship.
UC, CSU

226  CLASS GUITAR III  2 UNITS
Prerequisite: MUS 127 or by examination
Corequisite: None
Recommended Preparation: None
2 hours lecture
Guitar for non-music majors. Continuation of MUS 127 with emphasis on high position reading, introductory chord and scale alterations, and technical development.
UC, CSU

227  CLASS GUITAR IV  2 UNITS
Prerequisite: MUS 226 or by examination
Corequisite: None
Recommended Preparation: None
2 hours lecture
Guitar for non-music majors. Continuation of MUS 226 with emphasis on playing solos and accompaniments in various styles and idioms.
UC, CSU

256  JAZZ ENSEMBLE III  1 UNIT
Prerequisite: Audition; ability to play an appropriate jazz ensemble instrument.
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study of representative jazz ensemble compositions in a wide variety of styles at regular rehearsals and public performances.
UC, CSU
257 JAZZ ENSEMBLE IV 1 UNIT
Prerequisite: Audition; ability to play an appropriate jazz ensemble instrument.
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study of representative jazz ensemble compositions in a wide variety of styles at regular rehearsals and public performances.
UC, CSU

258- CHORUS 1 UNIT
259
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture/laboratory
Study and performance of standard and contemporary choral literature for choral ensemble. Open to all singers in the community and students of the college.
CSU

270- CLASS VOICE 2 UNITS
271
Prerequisite: None
Corequisite: None
Recommended Preparation: Ability to read music
2 hours lecture
Designed to help the student learn to use the voice correctly. Principles of vocal placement, posture, balance, breath control and vocal tone are emphasized through individual performances.

298 SELECTED TOPICS IN MUSIC 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Music not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN MUSIC 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Music not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU

ORNAMENTAL HORTICULTURE

090 INTRODUCTION TO LANDSCAPE MAINTENANCE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of landscape maintenance methods and materials. Topics include plant and weed identification, basic principles of soil science, fertilizer requirements, and environmental factors required for plant growth. The lab will cover topics such as pruning techniques, fertilizer applications, planting procedures and soil preparation necessary to plant and maintain trees, shrubs, perennials, annuals and ground covers. Offered as Credit/No Credit only. Non-associate degree applicable.

092 BASIC IRRIGATION AND TURF MAINTENANCE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of irrigation and turf maintenance methods and materials. Topics include weed control, lawn and turf grass establishment and maintenance, proper mowing procedures, basic equipment operation, irrigation basics, and xeriscape principles. Pruning and planting techniques along with plant identification, planting and maintenance of flower beds with perennials or annuals will also be covered. Offered as Credit/No Credit only. Non-associate degree applicable.

094 RETAIL AND WHOLESALE NURSERY INDUSTRY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of retail and wholesale nursery operations. Topics include plant material, planting mediums, fertilizers, growing structures and plant propagation techniques. Types of nurseries, container grown plants, diagnosis of plant problems, customer relations, sales, greenhouse and nursery production techniques will also be covered. Offered as Credit/No Credit only. Non-associate degree applicable.
INTRODUCTION TO THE HORTICULTURE INDUSTRY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Provides students with an introduction to the horticulture industry through video, text, field trips and guest lectures. Topics include fundamental skills necessary for planting and maintaining gardens and lawns, the cultivation of certain plant varieties, methods for improving existing gardens, knowledge and techniques for reducing expenses of landscaping, and maintaining urban gardens. Offered as Credit/No Credit only. Non-associate degree applicable.

XERISCAPE: WATER CONSERVATION IN THE LANDSCAPE 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture
Hydrology and water management as it applies to the landscape. Topics include plant selection, landscape design principles for water conservation, irrigation system selection and management, soil preparation and management, and current topics and issues of California and United States water conservation efforts.

FLORAL DESIGN I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 2 hours laboratory
Theory and practice of basic geometric floral design, identification of flowers and foliage, and practical skills necessary for employment in the floral industry. Fresh flowers, artificials and dried flowers will be used.

FLORAL DESIGN II 3 UNITS
Prerequisite: OH 114
Corequisite: None
Recommended Preparation: None
2 hours lecture, 2 hours laboratory
Theory and practice of parallel, vegetative, new wave and contemporary line designs for parties, holidays and special occasions primarily using fresh flowers. Silks, dried flowers, foliage and unique props for creating floral designs will also be covered.

WEDDING DESIGN I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 2 hours laboratory
Numerous styles of wedding bouquets and corsages including church and reception floral designs, with emphasis on skills, mechanics and speed necessary for use in the floral industry.

SPECIAL OCCASION FLORISTRY 3 UNITS
Prerequisite: OH 114 or one year high school floral design or trade experience
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Students will learn to create unique floral arrangements used for parties, weddings, funerals and gala events. Arrangements will focus on the use of unusual and exotic flowers, containers and special mechanical props.

WEDDING DESIGN II 3 UNITS
Prerequisite: OH 117
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Theory and practice of designs used for weddings including bouquets for brides and attendants, corsages, church decorations, and reception decorations primarily using fresh flowers.

FUNDAMENTALS OF ORNAMENTAL HORTICULTURE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of plant structure and function. Topics include basic principles of soil science and fertilizer requirements, and the growth of plants in regard to the environmental factors of water, light and temperature. The lab gives an overview of various skills needed in all fields of ornamental horticulture including pruning, basic equipment operation, fertilizer application and general nursery skills.

PLANT PROPAGATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Principles of plant propagation from seed, cutting, budding, grafting, layering, division and tissue culture. Greenhouses, cold frames, mist chambers and other propagating structures will be discussed along with stock selection, use of rooting hormones, proper sanitation procedures and protection of young seedlings from disease. Lab exercises include propagation of plant material by various methods as well as working with various structures, tools and equipment common to plant propagation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Corequisite</th>
<th>Recommended Preparation</th>
<th>Lecture/Laboratory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>PLANT PEST CONTROL</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2/3</td>
<td>Identification and control of insects, mites, spiders, snails, weeds, and diseases that affect ornamental plants. Emphasizes their morphological and phylogenetic relationships, habits, habitats, and important characteristics affecting the health of ornamental plants. Control methods will stress integrated pest management. CSU</td>
</tr>
<tr>
<td>140</td>
<td>SOILS</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2/3</td>
<td>Study of soil formation, characteristics, and classification. Emphasis on the management of various soil types with regard to pH, salinity, texture, organic matter control, and other variables. The lab covers a complete land judging system with several off-campus surveys during the semester. UC, CSU</td>
</tr>
<tr>
<td>170</td>
<td>PLANT MATERIALS: TREES AND SHRUBS</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Identification, cultural requirements, and landscape uses of ornamental trees and shrubs common to the California landscape. UC, CSU</td>
</tr>
<tr>
<td>172</td>
<td>INTRODUCTION TO LANDSCAPE DESIGN</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2/3</td>
<td>Principles of landscape design for parks, residential, and commercial projects. Studies of color, texture, form, and use of landscape material. Emphasis on selection and placement of plant material, walks, patios, and other structures for landscape use. The lab emphasizes practice in the design and drafting of actual landscape projects. CSU</td>
</tr>
<tr>
<td>173</td>
<td>INTERMEDIATE LANDSCAPE DESIGN</td>
<td>3</td>
<td>OH 172</td>
<td>None</td>
<td>None</td>
<td>2/3</td>
<td>Landscape design course covering advanced site analysis, use relationships, outside furniture and structures, color presentations, and client/designer relationships as they relate to estate, greenbelt, and advanced planting designs. CSU</td>
</tr>
<tr>
<td>174</td>
<td>TURF AND GROUND COVER MANAGEMENT</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2/3</td>
<td>Building, care, and maintenance of turf grasses and ground covers in parks and landscaping. Soil preparation, planting, fertilizing, and maintenance of common and special turf grasses and ground covers. Particular pest and disease problems and their control. CSU</td>
</tr>
<tr>
<td>176</td>
<td>PLANT MATERIALS: ANNUALS AND PERENNIALS</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Identification, cultural requirements, and landscape value of common annuals and perennials used as bedding plants, annual color, and in the commercial floral industry. CSU</td>
</tr>
<tr>
<td>180</td>
<td>SPECIAL STUDIES OR PROJECTS IN ORNAMENTAL HORTICULTURE</td>
<td>1-3</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>3-9</td>
<td>Individual study, research, or projects in the field of Ornamental Horticulture under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units. CSU</td>
</tr>
<tr>
<td>200</td>
<td>INTRODUCTION TO COMPUTER-AIDED LANDSCAPE DESIGN</td>
<td>3</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>2/3</td>
<td>Introduction to computer-aided landscape design using Landcadd® software. Creation of site plans, landscape plans, sprinkler plans, contour maps, and landscape estimates. Elevation and perspective drawings are also created. Only offered at Southwestern College. Students must enroll at Southwestern College and register for LA 200. CSU</td>
</tr>
</tbody>
</table>
220 LANDSCAPE CONSTRUCTION: CONCRETE AND MASONRY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hour lecture, 3 hours laboratory
Study of landscape construction methods and materials. Topics include landscape contract law, concrete flat work including stamped concrete, brick, block, stone masonry, and proper design and construction of retaining and free standing walls. Grading and installation of plant material will also be covered.
CSU

221 LANDSCAPE CONSTRUCTION: IRRIGATION AND CARPENTRY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of landscape construction methods and materials. Topics include irrigation and drainage plan reading, materials and components, installation and construction. Installation and troubleshooting of control valves and control clocks will also be covered. Includes basic materials and methods for construction of decks, overhead structures, wooden fences and gates. Also covers code and design requirements for irrigation, drainage and landscape structures.
CSU

222 JAPANESE GARDEN CONSTRUCTION AND MAINTENANCE 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Introduction to Japanese garden concepts and techniques. Includes the professional practices required for construction and sustainable maintenance. Concepts and techniques of Japanese gardens will cover Sakuteiki, the oldest garden design book written in the 11th Century. Koi pond and waterfall construction, Zen stone garden (dry landscape garden), bamboo fences, water-basin, traditional pruning, and other basic construction and maintenance techniques.
CSU

225 LANDSCAPE CONTRACTING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Covers the practices in applying standard techniques in landscape construction and estimating for landscape trades. Reviews the rules, regulations, and licensing laws governing landscape contractors set forth by the State of California. Includes an exploration of the field of landscape contracting and its relationship to landscape architecture and management.
CSU

235 PRINCIPLES OF LANDSCAPE IRRIGATION 4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
4 hours lecture
Principles of hydraulics as applied to landscape irrigation systems including static and dynamic pressures, pipe flows and velocities, pipe sizing, water hammer, pump selection and use. Includes an introduction to system components including valves, backflow prevention devices, controllers and pumps and pipe.
CSU

238 IRRIGATION SYSTEM DESIGN 3 UNITS
Prerequisite: OH 235 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Introduces students to the basic design and technical skills required to produce professional irrigation system designs. Building on the knowledge acquired in OH 235, students will design complete spray and low-volume systems, calculate hydraulic parameters and schedules, prepare details and specifications, practice presentation skills, analyze working designs, learn head spacing and pipeline layout, and specify equipment using manufacturers' catalogs. A design studio environment is used (including team building and mentoring exercises) to prepare students for entry-level employment in the irrigation design field.
CSU

240 GREENHOUSE PLANT PRODUCTION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of greenhouse plant production. Emphasis on the scheduling of greenhouse crops common to Southern California. Sections will cover equipment, structures, environmental control, estimation of crop production requirements, production and sales of common greenhouse crops.
CSU

260 ARBORICULTURE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Intensive course in the preservation and care of woody plants from seedling to removal. Theory in tree growth, form, fertilization, irrigation, pruning and integrated pest management. Practical application of safety equipment, rope and saddle, climbing spurs, cabling, bracing, pruning and removal of trees.
CSU
261 TREE SURGERY AND SPECIALIZED PRUNING TECHNIQUES 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, .5 hour laboratory
Explores the concepts and procedures of specific pruning techniques for various ornamental and fruit trees to influence flowers, fruit and growth. Response to pruning is predictable and can be a management tool. Cabling, bracing, cavity repair, injury from failure treatments, crown cleaning versus crown thinning, and topping alternatives like crown reduction and restoration. Students will learn practical application of pruning theories and principles.

CSU

262 ARBORICULTURE: PALMS AND RELATED PLANTS 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, .5 hour laboratory
Provides opportunities to learn the physiology of palms and other monocots, identification traits, and appropriate uses of common species. Understanding requirements for proper growing conditions and pruning of these plants will improve cultural management and assist with the diagnosis and treatment of common biotic and abiotic disorders.

CSU

263 URBAN FORESTRY 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, .5 hour laboratory
Introduces students to the theory and practice of conducting detailed tree inventories, management of public trees, tree evaluation for hazard assessment and risk reduction programs, legal aspects of trees and appraisal of value methods for trees. Students will also learn site evaluation, benefits of tree volunteer organizations, priority action plans and emergency response plans.

CSU

265 GOLF COURSE AND SPORTS TURF MANAGEMENT 3 UNITS
Prerequisite: OH 174
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Designed to give students advanced study in the specialization of both golf course and athletic field management. Includes specialized turf management techniques, specialized equipment, budget development, scheduling requirements and administrative considerations.

CSU

275 DIAGNOSING HORTICULTURAL PROBLEMS 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: OH 120, 130
1 hour lecture, 1.5 hours laboratory
Provides methods for positive identification and understanding of symptoms for accurate diagnosis of plant problems in the landscape and nursery. Biotic and abiotic causal agents including cultural influences, nutrient deficiencies and toxicities, pest and disease problems, soil salinity, aeration, drainage and irrigation problems will be discussed. Control and correction of disorders will be determined through an understanding of the organism or function involved.

CSU

276 HORTICULTURAL EQUIPMENT REPAIR AND MAINTENANCE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
General maintenance and specific repair procedures for common horticultural equipment including troubleshooting, tune-up and proper preventive maintenance programs for small and medium two- and four-cycle engines. The lab includes work on mowers, trenchers, trimmers, tractors, spray rigs and other equipment.

CSU

280 BACKFLOW TESTER TRAINING 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 hours lecture, 1.5 hours laboratory
Prepares students for the American Water Works Association Backflow Prevention Assembly Tester Certification. Includes backflow device installation and testing procedures required for the certification testing.

CSU

282 CROSS-CONNECTION CONTROL SPECIALIST 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the administrative and technical procedures required for a cross-connection program including system inspections, hazard evaluation, identification of cross-connection problems and backflow prevention devices, shut-down tests and reclaimed water systems.

CSU
283 CROSS CONNECTION CONTROL SHUTDOWN TEST PROCEDURES 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Designed to train students in the legal and practical aspects of performing a cross connection shutdown test for sites using recycled water. Helps prepare students for certification for work with recycled water on landscape sites.

284 CROSS-CONNECTION CONTROL PROGRAM SPECIALIST–RC 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Students will learn the legal and practical aspects of recycled water including characteristics, uses, permitting requirements, shut-down test procedures and reporting requirements. Includes field observations of actual shut-down tests.

290 COOPERATIVE WORK EXPERIENCE EDUCATION 1-4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours paid or 4 hours unpaid work experience per week per unit
Practical application of principles and procedures learned in the classroom to the various phases of horticulture. Work experience will be paid or unpaid at local nurseries and landscape-related companies. Placement assistance will be given. Two on-campus sessions with students will be scheduled. May be repeated for up to 12 units.

CSU

298 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Ornamental Horticulture not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

CSU

299 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE 1-4 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics in Ornamental Horticulture not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

CSU
| Course Code | Course Name                              | Units | Prerequisite                      | Corequisite | Recommended Preparation | Hours Lecture | Course Description                                                                                                                                                                                                 |
|------------|------------------------------------------|-------|----------------------------------|-------------|-------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| 130        | LEGAL RESEARCH AND WRITING              | 3     | PARA 111 or equivalent           | None        | ENGL 111 with grade 'C' or better | 3            | Includes in-depth legal research, writing research reports and subject matter reports on legal issues, case briefings and citations utilizing the uniform system of citation (“Blue Book”) and other citators.                                      |
| 132        | COMPUTER ASSISTED LEGAL RESEARCH (CALR) | 3     | PARA 100, 130 or concurrent      | None        | None                    | 3            | Study of personal computer software and programs designed specifically for use in law offices and legal environments, including but not limited to specific applications such as estate planning, probate accounting, bankruptcy filings, calendaring, legal project management, deposition summaries, computer assisted research (including CD ROM applications), and time and billing programs. |
| 135        | BANKRUPTCY LAW                           | 1     | PARA 100                         | None        | None                    | 1            | The United States Federal Bankruptcy Act (as amended) will be the foundation of this examination of bankruptcy law and practice. Students will be exposed to the jurisdictional and filing requirements for bankruptcy cases under Chapters 7, 11 and 13 of the Bankruptcy Act and will learn the rules of federal procedure associated with bankruptcy case filings. |
| 140        | CRIMINAL LAW AND PROCEDURES             | 3     | PARA 100                         | None        | None                    | 3            | The California Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pre-trial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included. |
| 145        | ESTATE PLANNING                          | 3     | PARA 100                         | None        | None                    | 3            | Overview of the subject of planning an owner’s estate including a review of the customary means of accomplishing estate planning objectives including wills, trusts, taxation, asset protection and gift-giving programs. |
| 150        | FAMILY LAW                               | 3     | PARA 100                         | None        | None                    | 3            | Domestic relations matters such as marriage, divorce, dissolution, child custody and support, visitation and adoptions are included. The law regulating such matters and the drafting of appropriate documents will be emphasized. |
| 155        | INSURANCE LAW                            | 3     | PARA 100                         | None        | None                    | 3            | Includes principles of indemnity, interests protected, the transfer of risk, claims made versus occurrence policies, subrogation, review of insurance forms and alternative dispute resolution. |
| 160        | PERSONAL INJURY                          | 1     | PARA 100                         | None        | None                    | 1            | Study of the essentials of tort actions with emphasis on personal injury and other forms of negligence. Statutes of Limitations applicable to tort actions will be emphasized. Theories of recovery, filing requirements, case handling, witness interviewing and evidence requirements under current California law will be reviewed. |
| 165        | PROBATE LAW                              | 3     | PARA 100                         | None        | None                    | 3            | The law of wills, estates and estate administration including testate and intestate estates, and law of descent and distribution will be discussed. |

CSU
170 **WORKER'S COMPENSATION** 1 UNIT  
Prerequisite: PARA 100 or equivalent  
Corequisite: None  
Recommended Preparation: None  
1 hour lecture  
Overview of California’s Worker’s Compensation statutes, including the concept of no-fault insurance and the administration of contested compensation claims for death, disability and vocational rehabilitation. The student will compute awards based upon current benefit formulae.  
CSU

180 **GOVERNMENT AND PUBLIC CONTRACTS** 3 UNITS  
Prerequisite: PARA 100 or equivalent  
Corequisite: None  
Recommended Preparation: None  
3 hours lecture  
Study of government and public contracting rules and regulations, including but not limited to Federal Acquisition Regulations (FAR) and Circulars, types of government contracts, Requests for Proposals (RFP), the Competition in Contracting Act (1984) and miscellaneous concepts in contracting with governmental agencies.  
CSU

199 **SPECIAL STUDIES OR PROJECTS IN PARALEGAL STUDIES** 1-3 UNITS  
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
3-9 hours  
Individual study, research or projects in the field of Paralegal Studies under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.  
CSU

250-252 **INTERNSHIP** 1-3 UNITS  
Prerequisite: PARA 100  
Corequisite: None  
Recommended Preparation: None  
5 hours paid or 4 hours unpaid work experience per week per unit  
Practical work experience in a cooperating law office or corporate legal department.  
CSU

298 **SELECTED TOPICS IN PARALEGAL STUDIES** 1-3 UNITS  
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
1-9 hours  
Selected topics in Paralegal Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. **Offered as Credit/No Credit only. Non-associate degree applicable.**  
CSU

299 **SELECTED TOPICS IN PARALEGAL STUDIES** 1-3 UNITS  
Prerequisite: Varies with topic  
Corequisite: Varies with topic  
Recommended Preparation: Varies with topic  
1-9 hours  
Selected topics in Paralegal Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.  
CSU
PERSONAL DEVELOPMENT—COUNSELING

101 INTRODUCTION TO COLLEGE .5-1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 - 1 hour lecture
Designed to acquaint students with the college, its facilities, services, academic regulations and degree and transfer programs. Students will receive guidance in educational planning. Offered as Credit/No-Credit only. Non-associate degree applicable.

103 STANDARDIZED TEST PREPARATION 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
How to prepare for standardized tests such as SAT, ACT, etc. Includes information on test taking, math preparation and English preparation. Offered as Credit/No Credit only. Non-associate degree applicable.

114 BASIC SKILLS PRACTICUM 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Lecture, discussion and practicum course designed to support academic success in college. Students will be given diagnostic tests at the beginning of the course to establish a personal plan for improvement. The lecture portion will provide the basic information needed to increase library competence. Library skills will also be developed via research. Students will work on their own projects or ones that support their goals. Offered as Credit/No Credit only. Non-associate degree applicable.

115 BASIC SKILLS PRACTICUM 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture
Lecture, discussion and practicum course designed to support academic success in college. Students will be given diagnostic tests at the beginning of the course to identify areas of growth and establish a personal plan for improvement. Emphasis on math improvement, English and writing improvement, and beginning computer skills. One-to-one tutoring, cooperative learning, group projects, and individual study will be utilized. Offered as Credit/No Credit only. Non-associate degree applicable.

116 BASIC SKILLS PRACTICUM 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Lecture, discussion and practicum course designed to support academic success in college. Students will be given diagnostic tests at the beginning of the course and will be assessed in the area of library skills. Areas of growth will be identified and a personal plan for improvement will be established. Emphasis on math improvement, English and writing improvement, library skills and beginning computer skills. One-to-one tutoring, cooperative learning, group projects, and individual study will be utilized. Offered as Credit/No Credit only. Non-associate degree applicable.

124 LIFELONG SUCCESS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Apply physiological, social and psychological principles to success in college, the world of work and life. Explore personality, interests, and values to increase self-understanding and select an appropriate major and career. Learn about careers of the future. Discover strategies for lifelong learning by identifying your learning style and applying psychological principles of learning and memory to academic study strategies. Apply life management techniques such as time and money management to accomplish personal goals. Examine adult stages of development and develop a plan for wellness and living a long and healthy life. Learn strategies for motivation and stress management. Practice creative and critical thinking techniques. Maximum of 3 units can be earned for taking PDC 124 and 120.

CSU, CSU GE

126 ORIENTATION TO COLLEGE: RE-ENTRY STUDENTS 2 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture
Discussion group to help returning older students adjust to college, meet other mature students with similar interests and concerns, and to help them look ahead to changes in their lives. Films, guest speakers, visits to the Career Center and Learning Resource Center, and important information about the catalog and class schedule, as well as graduation and transfer information are included.

CSU
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
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<th>Lecture</th>
<th>Lab</th>
<th>Notes</th>
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<td>130</td>
<td>STUDY SKILLS AND TIME MANAGEMENT</td>
<td>1 UNIT</td>
<td>None</td>
<td>None</td>
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<td>skills, goal-setting, note-taking and memory.</td>
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<td>199</td>
<td>SPECIAL STUDIES OR PROJECTS IN PERSONAL</td>
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<td>LEADERSHIP DEVELOPMENT: THEORIES OF LEADERSHIP</td>
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<td>1 hour</td>
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<td>230</td>
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<td>231</td>
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<td>various styles of leadership and group</td>
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<td>dynamics within the context of their own campus</td>
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<td>298</td>
<td>SELECTED TOPICS IN PERSONAL DEVELOPMENT–</td>
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CSU
080 EDUCATIONAL ASSESSMENT AND PRESCRIPTIVE PLANNING .5 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture
Assess, interpret and diagnose learning strengths and weaknesses for the purpose of identifying specific learning disabilities. Guidelines mandated by the California Community College System will be utilized to determine eligibility for Learning Disabilities Services. An orientation to the Learning Disabilities Program will be provided as well as prescriptive planning and IEP development. A conference will be held with the Learning Disabilities Specialist prior to the assessment process. Offered as Credit/No Credit only. Non-associate degree applicable.

090 LEARNING STRATEGIES PRACTICUM 1 UNIT ABCD
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Designed for students with specialized learning needs. Involves development and implementation of specific learning strategies in a developmental learning environment to assist the student’s academic performance. Offered as Credit/No Credit only. Non-associate degree applicable.

098 DEVELOPMENTAL SPELLING, LEVEL I 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Structured, sequential approach to spelling in a developmental learning environment designed to strengthen skill in spelling for students with specialized learning needs. Offered as Credit/No Credit only. Non-associate degree applicable.

199 SPECIAL STUDIES OR PROJECTS IN PERSONAL DEVELOPMENT–SPECIAL SERVICES 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Personal Development–Special Services under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

298 SELECTED TOPICS IN PERSONAL DEVELOPMENT–SPECIAL SERVICES 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Personal Development–Special Services not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN PERSONAL DEVELOPMENT–SPECIAL SERVICES 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Personal Development–Special Services not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
110 A GENERAL INTRODUCTION TO PHILOSOPHY 3 UNITS
(CAN PHIL 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
In this basic orientation the student explores, compares, analyzes, evaluates and discusses a variety of the principle questions addressed in philosophy. Typical questions examined are: What is the purpose of my existence? Can I know anything with certainty? Do I really have a free will? Can we prove that God exists? Why should I be moral? Whose self-interest counts?, etc. Issues covered will encompass relevant philosophical perspectives from Western and other major world cultures, and include contributions of women and minority cultures to the realm of philosophy.
UC, CSU, AA/AS GE, IGETC, CSU GE

115 HISTORY OF PHILOSOPHY I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Survey of ancient philosophy with emphasis on the development of philosophy from the Pre-Socratics through Aristotle, Hellenistic, Roman and medieval thinkers.
UC, CSU, AA/AS GE, IGETC, CSU GE

117 HISTORY OF PHILOSOPHY II 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Survey of philosophy from the Renaissance to the 20th Century including the development of modern scientific processes as well as empiricism, rationalism, idealism, etc.
UC, CSU, AA/AS GE, IGETC, CSU GE

125 CRITICAL THINKING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to critical thinking with emphasis on analyzing and constructing both inductive and deductive arguments. Critical reasoning will be applied to a variety of situations such as making sound decisions, evaluating claims and assertions, avoiding fallacious reasoning, etc.
UC, CSU, AA/AS GE, IGETC, CSU GE

130 LOGIC 3 UNITS
(CAN PHIL 6)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of correct thinking comprising both deductive and inductive inference and principles of scientific method. Application of fundamental principles of logic to practical problems.
UC, AA/AS GE, CSU GE, CSU

140 PROBLEMS IN ETHICS 3 UNITS
(CAN PHIL 4)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of values as they affect the individual and society. Conduct as expressed by ethical standards and natural law, problems and theories of beauty and value.
UC, CSU, AA/AS GE, IGETC, CSU GE

160 AMERICAN PHILOSOPHY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the main traditions of American philosophical thought with emphasis on the philosophers, their works and systems of philosophy peculiar to the United States. Includes American philosophy from the earliest time to the present.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN PHILOSOPHY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Individual study, research or projects in the field of Philosophy under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298 SELECTED TOPICS IN PHILOSOPHY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Philosophy not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN PHILOSOPHY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Philosophy not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
PHYSICAL EDUCATION
(SEE EXERCISE SCIENCE )

PHYSICAL SCIENCE

110 INTRODUCTION TO THE PHYSICAL SCIENCES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Broad approach to the physical sciences designed primarily for students not majoring in science. Main concepts of astronomy, physics, chemistry and earth sciences will be developed and discussed. Emphasis on the understanding of certain fundamental principles and their relationships, and not on mathematical problem solving. The applicability of some of these concepts to contemporary problems (e.g., nuclear energy, environmental problems) will be covered. Within this context, the methods and limitations of science will be demonstrated and the implications of science for society in the past, present and future will be discussed. Satisfies the general education requirements in science for graduation.

UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

111 PHYSICAL SCIENCE LABORATORY 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Laboratory exercises concerning physics, chemistry, geology and astronomy. Emphasis on discovery, measurement and observation.

UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN PHYSICAL SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Physical Science under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

UC, CSU

298 SELECTED TOPICS IN PHYSICAL SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Physical Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

UC, CSU

299 SELECTED TOPICS IN PHYSICAL SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Physical Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

UC, CSU
110 INTRODUCTORY PHYSICS  4 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Simple treatment of basic physics principles and phenomena with emphasis on relating them to events and processes of everyday living. Study of the description and cause of various kinds of motion, conservation laws, hot and cold bodies with heat exchange, sound in music and hearing, light and color perception, electricity and some of its practical uses, observation of atomic particles from radiation sources, and other subjects. There is no math prerequisite; the main emphasis is on understanding the concepts rather than doing many mathematical manipulations.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

120 GENERAL PHYSICS  4 UNITS
(CAN PHYS 2; CAN PHYS SEQ A = PHYC 120+121)
Prerequisite: MATH 170 or equivalent
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Problem solving as well as philosophical approach to physical phenomena such as force, linear and rotational motion and energy, simple harmonic motion and wave behavior, heat and thermodynamics. Laboratory experience is an integral part of this course. Not appropriate for students whose majors require PHYC 190.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

121 GENERAL PHYSICS  4 UNITS
(CAN PHYS 4; CAN PHYS SEQ A = PHYC 120+121)
Prerequisite: PHYC 120
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Continuation of general physics involving the study of electricity, magnetism, light and optical instruments, quantum behavior, atomic and nuclear physics, and radioactivity.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

130 FUNDAMENTALS OF PHYSICS  4 UNITS
Prerequisite: MATH 180 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Calculus-based problem solving as well as a philosophical approach to physical phenomena such as force, linear and rotational motion and energy, simple harmonic motion and wave behavior, heat and thermodynamics. Laboratory experience is an integral part of this course.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

131 FUNDAMENTALS OF PHYSICS  4 UNITS
Prerequisite: PHYC 130, MATH 180
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Calculus-based problem solving as well as a philosophical approach to physical phenomena such as electricity, magnetism, optics and modern physics. Laboratory experience is an integral part of this course.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

190 MECHANICS AND HEAT  5 UNITS
(CAN PHYS 8; CAN PHYS SEQ B = PHYC 190+200+210)
Prerequisite: MATH 180 or equivalent and credit for or concurrent enrollment in MATH 280
Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Deals with linear and rotational kinematics and dynamics, equilibrium, work, energy, momentum, gravitation, simple harmonic motion, thermal properties of matter and thermodynamics.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN PHYSICS  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Physics under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

200 ELECTRICITY AND MAGNETISM  5 UNITS
(CAN PHYS 12; CAN PHYS SEQ B = PHYC 190+200+210)
Prerequisite: PHYC 190 or equivalent and credit for or concurrent enrollment in MATH 280
Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Deals with the electric and magnetic behavior of matter. Primary emphasis on Maxwell’s Equations and their applications.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE

210 WAVE MOTION AND MODERN PHYSICS  5 UNITS
(CAN PHYS 14; CAN PHYS SEQ B = PHYC 190+200+210)
Prerequisite: PHYC 190 or equivalent and credit for or concurrent enrollment in MATH 281
Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Deals with hydrostatics, hydrodynamics, wave behavior, geometric and physical optics, relativity, light as a particle, matter as a wave, the hydrogen atom and the Schrodinger Equation, electrical conductivity of solids, lasers and nuclear physics.
UC credit limit, CSU, AA/AS GE, IGETC, CSU GE
SELECTED TOPICS IN PHYSICS 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics in Physics not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

Political Science

INTRODUCTION TO POLITICS AND POLITICAL ANALYSIS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

The primary aim of this course is to assist the student/citizen in the development of a set of skills which can be helpful in analyzing political situations in the world today. In order to accomplish this objective, students will be introduced to the basic approaches, perspectives, techniques and models of the political scientist. Accordingly, this course covers some universal aspects of political stability and change, ideologies, conflicts, institutions, political economy and issues. (Does not meet American Institutions requirement.)

UC, CSU, AA/AS GE, IGETC, CSU GE

INTRODUCTION TO U.S. GOVERNMENT AND POLITICS 3 UNITS

(CAN GOVT 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introduction to the basic structure and functions of the U.S. political system. The question of 'who governs?' will be studied from various theoretical perspectives. Examined will be the basis of the U.S. political system including the Constitution, federalism, capitalism and democracy. The policy-making role of traditional political institutions such as the media, the bureaucracy and special interests will be explored. All topics will be illustrated through reference to actual political events occurring as the course progresses.

UC, CSU, AA/AS GE, IGETC, CSU GE

INTRODUCTION TO COMPARATIVE GOVERNMENT AND POLITICS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Analyze the political systems of selected developed, transitional and developing countries of the world in order to understand the importance of political development, political institutions, political actors, political processes, and political change for the dynamics of today’s global society. (Does not meet American Institutions requirement.)

UC, CSU, AA/AS GE, IGETC, CSU GE
140* INTRODUCTION TO CALIFORNIA GOVERNMENT AND POLITICS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: POSC 121
3 hours lecture
Study of the principal features, organization and operation of state and local government within the framework of U.S. federalism. Emphasis on California state and local governments and contemporary political issues.
CSU, AA/AS GE, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN POLITICAL SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Political Science under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298 SELECTED TOPICS IN POLITICAL SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Political Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

UC, CSU

299 SELECTED TOPICS IN POLITICAL SCIENCE 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Political Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU

* Meets part of the American Institutions requirement. See “Transfer” section under CSU General Education Breadth for complete requirements.

PSYCHOLOGY

120 INTRODUCTORY PSYCHOLOGY 3 UNITS
(CAN PSY 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the facts and theories which seek to explain and understand human thought and behavior including such topics as personality, psychotherapy, learning, memory, interpersonal relationships, adjustment and biological influences.
UC, CSU, AA/AS GE, IGETC, CSU GE

125 CROSS-CULTURAL PSYCHOLOGY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to theories and research findings regarding cultural influences on human behavior and cognitive processes (lifespan development, abnormal behavior and mental health, drug use, self-concept, emotion, gender schemas and gender roles, social behavior, perception, learning, intelligence and memory). By providing students with a non-judgmental understanding of how culture influences human behavior, this course will make them more equipped to interact in a world where there is increasing contact among different cultures.
UC, CSU, AA/AS GE, IGETC, CSU GE

134 HUMAN SEXUALITY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Review of the biological, psychological and social aspects of human sexuality including sexuality throughout the lifespan, individual and cultural variations, homosexuality, communication and relationships, sex therapy, sex roles, morality, contraception and STDs.
UC, CSU, AA/AS GE, IGETC, CSU GE

138 SOCIAL PSYCHOLOGY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Examination of the individual’s perception of and reaction to other people and social influences. Topics such as attitude formation, prejudice and discrimination, helping behavior, aggression, conformity, obedience, cooperation and conflict reduction, and group behavior are explored.
UC, CSU, AA/AS GE, IGETC, CSU GE
140 PHYSIOLOGICAL PSYCHOLOGY 3 UNITS
(CAN PSY 10)
Prerequisite: PSY 120
Corequisite: None
Recommended Preparation: None
3 hours lecture
Examination of the relationships between bodily processes and aspects of behavior. Review of fundamental research methods and major research findings in physiological psychology. Application of experimental methods in psychology, physiology and related disciplines to the understanding of perceptual processes, the control of movement, sleep and waking, reproductive behaviors, ingestive behaviors, emotion, learning, language and mental disorders are explored.
UC, CSU, AA/AS GE, IGETC, CSU GE

165 DEVELOPMENTAL PSYCHOLOGY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Overview of psychological research and theory involving the lifespan approach to human behavior and cognition. Explores the biological, emotional, social and cognitive development from infancy through childhood, adolescence, and adulthood. Topics include influences of drugs and disease on prenatal development, child-rearing methods, temperaments and personality, childhood disorders, development of language and thinking, gender roles, friendship, family and relationships, parenting and aging.
UC, CSU, AA/AS GE, IGETC, CSU GE

170 ABNORMAL PSYCHOLOGY 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Overview of psychological research and theory involving the causes and treatment of abnormal behavior. The major disorders include anxiety disorders (such as phobias, panic attacks, obsessive-compulsive), mood disorders (such as depression and bipolar), schizophrenic disorders, and personality disorders. Also included are the child/adolescence disorders (such as ADHD and eating disorders), substance abuse, mental retardation, sexual disorders, and the effects of stress on the body.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN PSYCHOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Psychology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

215 STATISTICS FOR THE BEHAVIORAL SCIENCES 3 UNITS
(CAN PSY 6)
Prerequisite: MATH 103 or 110 with a grade of "C" or better or equivalent
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Methods and experience in defining and solving quantitative problems in the behavioral sciences. Emphasis on the design of experiments and the application of a variety of parametric and nonparametric techniques to the analysis of data.
UC credit limit, CSU, AA/AS GE, CSU GE

220 LEARNING 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Examination of the basic principles and research in animal and human learning.
UC, CSU, AA/AS GE, IGETC, CSU GE

298 SELECTED TOPICS IN PSYCHOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Psychology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN PSYCHOLOGY 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Psychology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
125 ESCROW PROCEDURES I 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Methods and techniques of escrow procedures for real estate transactions and legal and ethical responsibilities. Topics include types of escrows, document preparation, terminology, phraseology, title and escrow procedures, adjustment of taxes, rents and charges.

126 ESCROW PROCEDURES II 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of exchanges, loans, escrow sales of trust, deeds and notes, consummation of land contracts and leasehold escrows.

127 ESCROW PROCEDURES III 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Escrows relating to condominiums, shopping centers, subdivided land, bulk sales, liquor licenses and other miscellaneous escrow transactions. Actual case problems are presented for evaluation and discussion including compliance with conditions, agency relationships, wrongful delivery, conditional deposits, liability and assignments.

190 REAL ESTATE PRINCIPLES 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Fundamental real estate course covering the basic laws and principles of California real estate. Provides understanding, background and terminology necessary for advanced study in specialized courses. Of assistance to those preparing for the real estate license examinations.

191 REAL ESTATE PRACTICE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Day-to-day operations in real estate roles and brokerage including listing, prospecting, advertising, financing, sales techniques, escrow and ethics.

192 REAL ESTATE FINANCE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Analysis of real estate financing including lending policies and problems in financing transactions in residential, apartment, commercial and special purpose properties. Methods of financing properties are emphasized.

193 REAL ESTATE LEGAL ASPECTS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the law governing real property, its sale, lease or other conveyance. Instruments utilized in conveyance or lease of such property will be examined and drafted.

194 REAL ESTATE APPRAISAL 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introductory course covering the purposes of appraisals, the appraisal process, and the different approaches, methods and techniques used to determine the value of various types of property. Emphasis on residential and single-unit property.

197 REAL ESTATE ECONOMICS 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of economic factors which determine the market and location of real property investments.

198 REAL ESTATE OFFICE ADMINISTRATION 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of administration, supervision and management of a real estate brokerage office.
199  SPECIAL STUDIES OR PROJECTS  1-3 UNITS
IN REAL ESTATE
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Real Estate under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
CSU

201  REAL ESTATE PROPERTY MANAGEMENT  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of property management and problem areas associated with operating income-producing property.
CSU

202  BUSINESS OPPORTUNITIES SALES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Overview of the sale and transfer of a business from the perspective of a real estate licensee handling its listing and sale.
CSU

230  COMMERCIAL REAL ESTATE  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the principles and procedures applicable to the leasing, management and operations of commercial and investment real estate properties. Discussion of computerized property management techniques, procedures and tax and accounting methods applicable to commercial real estate properties.
CSU

250  REAL ESTATE INTERNSHIP  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
15 hours paid or 12 hours unpaid work experience per week
Practical work experience in the real estate industry. May be repeated for a maximum of 9 units.
CSU

290  REAL ESTATE LICENSE TRAINING  1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Preparation for the California Department of Real Estate Salesperson’s or Broker’s examination.
CSU

292  MORTGAGE LOAN BROKERING AND LENDING  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the practices and procedures involved in advanced real estate finance including secondary money market sources, federal loan qualification requirements and special problems in current residential and commercial real estate financing.
CSU

294  ADVANCED REAL ESTATE APPRAISAL  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the practices and procedures involved in advanced real estate appraising including the analysis of income and commercial properties.
CSU

298  SELECTED TOPICS IN REAL ESTATE  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Real Estate not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299  SELECTED TOPICS IN REAL ESTATE  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Real Estate not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
CSU
100 INTRODUCTION TO RELIGION  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introductory course in the origins and features of religion as a unifying point in the social ordering of the world and its individual cultures.

UC, CSU, AA/AS GE, IGETC, CSU GE

120 WORLD RELIGIONS  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the teachings, major figures, attitudes and practices of world religions.

UC, CSU, AA/AS GE, IGETC, CSU GE

130 SCRIPTURES OF WORLD RELIGIONS  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Problems in the study of religions based on the study of scripture selected from Eastern and Western religions.

UC, CSU, AA/AS GE, IGETC, CSU GE

140 RELIGION AND CULTURAL EXPRESSION  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the various ways in which religious thought and belief are incorporated into the cultural expression of societies. Specific emphasis given to understanding religion through its expression in art, music, literature and philosophy.

UC, CSU, AA/AS GE, IGETC, CSU GE

150 SCRIPTURES OF INDIA AND CHINA  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the religious and philosophical modes of thought and ways of life in the Orient.

UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN RELIGIOUS STUDIES  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Religious Studies under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

UC, CSU

200 SCIENCE AND RELIGION  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of science and religion as two unique aspects of humanity’s singular search for personal meaning and the harnessing of natural forces, both of which significantly affect humanity’s self-definition and positioning in the cosmic order.

UC, CSU, AA/AS GE, IGETC, CSU GE

210 INTRODUCTION TO THE HEBREW SCRIPTURES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introductory survey of the contents, themes, literary genres, canons, historical background, and modern critical methods for analysis and interpretation of the Hebrew scriptures.

UC, CSU, AA/AS GE

215 INTRODUCTION TO THE NEW TESTAMENT  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

UC, CSU, AA/AS GE

298 SELECTED TOPICS IN RELIGIOUS STUDIES  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Religious Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN RELIGIOUS STUDIES  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Religious Studies not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

UC, CSU
112  INTRODUCTION TO OCEANOGRAPHY  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Physical science course designed to integrate aspects of physics, chemistry, meteorology and geology as they relate to the marine environment. The history and development of oceanography and the present and future importance of the oceans are also discussed.
UC, CSU, IGETC, CSU GE

199  SPECIAL STUDIES OR PROJECTS IN SCIENCE  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Science under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU

298  SELECTED TOPICS IN SCIENCE  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Science not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

120  INTRODUCTORY SOCIOLOGY  3 UNITS
(CAN SOC 2)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Study of the nature of social life, the dynamics of human interaction, symbolic foundation of behavior, social organization and control, social change, and the tools of sociological investigation.
UC, CSU, AA/AS GE, IGETC, CSU GE

125  MARRIAGE, FAMILY AND ALTERNATIVE LIFESTYLES  3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Survey of American courtship, marriage and family behavior with primary emphasis on understanding factors conducive to successful marital and family relationships. Some consideration is given to historical background, minority family types and cross-cultural comparisons.
UC, CSU, AA/AS GE, CSU GE

130  CONTEMPORARY SOCIAL PROBLEMS  3 UNITS
(CAN SOC 4)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Identification and analysis of contemporary American social problems. Criteria are established whereby students can better judge the effectiveness of various plans for social betterment.
UC, CSU, AA/AS GE, IGETC, CSU GE

199  SPECIAL STUDIES OR PROJECTS IN SOCIOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Sociology under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.
UC, CSU
SELECTED TOPICS IN SOCIOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Sociology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

SELECTED TOPICS IN SOCIOLOGY  1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Sociology not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.

SPANISH

120 SPANISH I  5 UNITS
(CAN SPAN 2; CAN SPAN SEQ A = SPAN 120+121)
Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture
Introductory course to the Spanish language and the cultures of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the beginning novice level. Since the focus will be on basic communication skills, the class will be conducted in Spanish as much as possible. While becoming familiar with the Spanish speaking world, students will learn structures that will enable them to function in Spanish in everyday contexts.
UC, CSU, AA/AS GE, IGETC, CSU GE

120A SPANISH I  2.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture
Equivalent to the first half of SPAN 120. Allows more time for the student who has not studied the Spanish language. Introduces students to the Spanish language and the cultures of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the introductory beginning novice level. Since the focus will be on basic communication skills, the class will be conducted in Spanish as much as possible. While becoming familiar with the Spanish speaking world, students will be introduced to structures that will enable them to begin to function in Spanish in everyday contexts. Must be taken with SPAN 120B in order to meet the General Education requirement. If taken in conjunction with SPAN 120, the cumulative number of units which may be earned is 5 units.
UC credit limit, CSU, AA/AS GE, CSU GE

120B SPANISH I  2.5 UNITS
Prerequisite: SPAN 120A
Corequisite: None
Recommended Preparation: None
2.5 hours lecture
Equivalent to the second half of SPAN 120 and the continuation of SPAN 120A. Continues to introduce students to the Spanish language and the cultures of its speakers. Continues to facilitate the practical application of the language in everyday oral and written communication at the beginning novice level. Since the focus will be on basic communication skills, the class will be conducted in Spanish as much as possible. While becoming familiar with the Spanish speaking world, students will continue to acquire structures that will enable them to function in Spanish in everyday situations. Must be taken with SPAN 120A in order to meet the General Education requirement. If taken in conjunction with SPAN 120, the cumulative number of units which may be earned is 5 units.
UC credit limit, CSU, AA/AS GE, CSU GE
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Corequisites</th>
<th>Recommended Preparation</th>
<th>Lecture Hours</th>
<th>Description</th>
<th>GE Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>121</td>
<td>SPANISH II</td>
<td>5</td>
<td>CAN SPAN 4; CAN SPAN SEQ A = SPAN 120+121</td>
<td>None</td>
<td>None</td>
<td>5</td>
<td>Continuation of SPAN 120. Continues to develop oral and written skills based on practical everyday needs.</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>135</td>
<td>SPANISH FOR PROFESSIONAL PERSONNEL I</td>
<td>3</td>
<td></td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Practical essentials of conversing in Spanish for persons engaged in some professional fields such as health or business. Offered as Credit/No Credit only.</td>
<td>CSU</td>
</tr>
<tr>
<td>141</td>
<td>SPANISH AND LATIN AMERICAN CULTURES</td>
<td>3</td>
<td></td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Survey of major characteristics of Spanish, Latin American and Chicano cultures as reflected in literature, the arts, philosophy and folklore.</td>
<td>CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>145</td>
<td>HISPANIC CIVILIZATIONS</td>
<td>3</td>
<td></td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>General overview of the cultures of Spain and Latin America while directly providing an opportunity to explore the cultural richness of the Hispanic world through a particular country. May be offered as an on-site tour of a specific Hispanic country.</td>
<td>CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>199</td>
<td>SPECIAL STUDIES OR PROJECTS IN SPANISH</td>
<td>1-3</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>3-9</td>
<td>Individual study, research or projects in the field of Spanish under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.</td>
<td>UC, CSU</td>
</tr>
<tr>
<td>220</td>
<td>SPANISH III</td>
<td>5</td>
<td>CAN SPAN 8; CAN SPAN SEQ B = SPAN 220+221</td>
<td>None</td>
<td>None</td>
<td>5</td>
<td>Continuation of SPAN 121. Continues to develop oral, reading, writing and listening skills in order to acquire proficiency in Spanish.</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>221</td>
<td>SPANISH IV</td>
<td>5</td>
<td>CAN SPAN 10; CAN SPAN SEQ B = SPAN 220+221</td>
<td>None</td>
<td>None</td>
<td>5</td>
<td>Continuation of SPAN 220. Continues to develop oral, reading, writing and listening skills in order to improve proficiency in Spanish.</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>250</td>
<td>CONVERSATIONAL SPANISH</td>
<td>3</td>
<td>SPAN 121 or four years of high school Spanish or equivalent</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Continues to develop oral, reading, writing and listening skills but with an emphasis on oral proficiency.</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>251</td>
<td>CONVERSATIONAL SPANISH</td>
<td>3</td>
<td>SPAN 250 or 121 or four years of high school Spanish or equivalent</td>
<td>None</td>
<td>None</td>
<td>3</td>
<td>Continues to develop oral, reading, writing and listening skills but with an emphasis on oral proficiency.</td>
<td>UC, CSU, AA/AS GE, IGETC, CSU GE</td>
</tr>
<tr>
<td>298</td>
<td>SELECTED TOPICS IN SPANISH</td>
<td>1-5</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>1-15</td>
<td>Selected topics in Spanish not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.</td>
<td>UC, CSU</td>
</tr>
<tr>
<td>299</td>
<td>SELECTED TOPICS IN SPANISH</td>
<td>1-5</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>Varies with topic</td>
<td>1-15</td>
<td>Selected topics in Spanish not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.</td>
<td>UC, CSU</td>
</tr>
</tbody>
</table>
SURVEYING (ENGINEERING) COURSES

218 PLANE SURVEYING 4 UNITS
Prerequisite: MATH 170 or concurrent enrollment
Corequisite: None
Recommended Preparation: None
2 hours lecture, 6 hours laboratory
Use, care and adjustment of surveying instruments. Fundamental surveying methods, traverse measurements and area computations. Introduction to horizontal and vertical curves, stadia, construction layout. Introduction to topographic mapping. Earthwork computations. Listed as ENGR 218.
UC, CSU

240 ADVANCED SURVEYING 4 UNITS
Prerequisite: ENGR 218
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
UC, CSU

THEATRE ARTS

110 INTRODUCTION TO THEATRE 3 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Designed to give students the analytic tools of theatre to provide a working knowledge of all areas included in the process of producing a play. Through lectures, attendance at selected performances and in-class projects, students will be introduced to theatre arts as it reflects the synthesis of the arts and a definition of the humanities in Western Civilization. Recommended for students interested in theatre who want to have a better understanding of how this art form continues to help shape society.
UC, CSU, AA/AS GE, IGETC, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN THEATRE ARTS 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
3-9 hours
Individual study, research or projects in the field of Theatre Arts under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

298 SELECTED TOPICS IN THEATRE ARTS 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Theatre Arts not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN THEATRE ARTS 1-3 UNITS
Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics in Theatre Arts not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.
UC, CSU
WORK EXPERIENCE

110 GENERAL COOPERATIVE WORK EXPERIENCE EDUCATION 1-3 UNITS
- Prerequisite: None
- Corequisite: None
- Recommended Preparation: None
- 75 hours paid or 60 hours unpaid work experience per unit
Supervised work experience to assist students in acquiring desirable work habits, attitudes and career awareness. Jobs may or may not be directly related to students' educational goals.

199 SPECIAL STUDIES OR PROJECTS IN WORK EXPERIENCE 1-3 UNITS
- Prerequisite: Varies with topic
- Corequisite: Varies with topic
- Recommended Preparation: Varies with topic
- 3-9 hours
Individual study, research or projects in the field of Work Experience under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. May be repeated for a maximum of 9 units.

298 SELECTED TOPICS IN WORK EXPERIENCE 1-3 UNITS
- Prerequisite: Varies with topic
- Corequisite: Varies with topic
- Recommended Preparation: Varies with topic
- 1-9 hours
Selected topics in Work Experience not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format. Offered as Credit/No Credit only. Non-associate degree applicable.

299 SELECTED TOPICS IN WORK EXPERIENCE 1-3 UNITS
- Prerequisite: Varies with topic
- Corequisite: Varies with topic
- Recommended Preparation: Varies with topic
- 1-9 hours
Selected topics in Work Experience not covered by regular catalog offerings. Course content and unit credit to be determined by the Office of Instruction and faculty. May be offered in a seminar, lecture and/or laboratory format.