11 Courses of Instruction

Course Numbering System

<table>
<thead>
<tr>
<th>Course Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-039</td>
<td>Non-degree Credit Courses</td>
</tr>
<tr>
<td>040-099</td>
<td>Degree Applicable Non-Transfer Courses</td>
</tr>
<tr>
<td>100-290*</td>
<td>Degree Applicable and Transfer level courses</td>
</tr>
<tr>
<td>299</td>
<td>Directed Studies</td>
</tr>
<tr>
<td>300-499</td>
<td>Upper Division Courses</td>
</tr>
</tbody>
</table>

*Courses numbered 100 and above are usually university parallel courses and are offered for transfer to colleges and universities. See course descriptions for any restrictions on transfer.

**FAC and PAC 4300 Series are non-transferable.

Code for Transferability of Courses

Where applicable, transferability of listed courses is designated by boldface symbols:

UC – Transfers to all University of California campuses and to most other four-year colleges.

UC (Credit Limit - See Counselor)
– Transfers to all University of California campuses and to most other four-year colleges, but there are limitations to the number of units that can be accepted for credit. The student should consult a counselor for details.

CSU Transfers to all campuses of the California State University system and to many other four-year colleges.
COURSE IDENTIFICATION NUMBERING SYSTEM (C-ID)

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

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

Counselors can always help students interpret or explain this information.

If a course has been approved for C-ID, you will find the corresponding C-ID number next to the course prefix and number within the course descriptions on the following pages. More courses may have been approved for C-ID since the publication of this catalog.

More courses may have been approved for C-ID since the publication of this catalog.
You can also see C-ID approvals for Rio Hondo College at C-ID.net.

<table>
<thead>
<tr>
<th>CID Descriptor</th>
<th>RHC Course(s)</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 110</td>
<td>ACCT 101</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>ACCT 110</td>
<td>ACCT 101H</td>
<td>Financial Accounting Honors</td>
</tr>
<tr>
<td>ACCT 120</td>
<td>ACCT 102</td>
<td>Managerial Accounting</td>
</tr>
<tr>
<td>AJ 110</td>
<td>AJ 101</td>
<td>Introduction to Administration of Justice</td>
</tr>
<tr>
<td>AJ 120</td>
<td>AJ 106</td>
<td>Criminal Law I</td>
</tr>
<tr>
<td>AJ 122</td>
<td>AJ 102</td>
<td>Criminal Procedures</td>
</tr>
<tr>
<td>AJ 124</td>
<td>AJ 104</td>
<td>Legal Aspects of Evidence</td>
</tr>
<tr>
<td>AJ 140</td>
<td>AJ 208</td>
<td>Principles of Investigation</td>
</tr>
<tr>
<td>AJ 150</td>
<td>AJ 275</td>
<td>Introduction to Forensic Science</td>
</tr>
<tr>
<td>AJ 160</td>
<td>AJ 105</td>
<td>Community Relations/Multicultural Issues Within Public Service</td>
</tr>
<tr>
<td>AJ 200</td>
<td>CORR 101</td>
<td>Introduction to Corrections</td>
</tr>
<tr>
<td>AJ 220</td>
<td>AJ 207</td>
<td>Juvenile Law and Procedure</td>
</tr>
<tr>
<td>ALTF 100X</td>
<td>AUTO 147</td>
<td>Introduction to Hybrid and Electric Vehicle Technology</td>
</tr>
<tr>
<td>ANTH 110</td>
<td>ANTH 101</td>
<td>Introduction to Physical Anthropology</td>
</tr>
<tr>
<td>ANTH 110</td>
<td>ANTH 101H</td>
<td>Introduction to Physical Anthropology Honors</td>
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### COURSE IDENTIFICATION NUMBERING SYSTEM (C-ID) — continued

<table>
<thead>
<tr>
<th>CID Descriptor</th>
<th>RHC Course(s)</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 115L</td>
<td>ANTH 101L</td>
<td>Physical Anthropology Lab</td>
</tr>
<tr>
<td>ANTH 120</td>
<td>ANTH 102</td>
<td>Introduction to Cultural Anthropology</td>
</tr>
<tr>
<td>ANTH 120</td>
<td>ANTH 102H</td>
<td>Introduction to Cultural Anthropology Honors</td>
</tr>
<tr>
<td>ANTH 130</td>
<td>ANTH 104</td>
<td>Introduction to Language and Culture</td>
</tr>
<tr>
<td>ANTH 150</td>
<td>ANTH 103</td>
<td>Introduction to Archaeology</td>
</tr>
<tr>
<td>ARTH 100</td>
<td>ART 110</td>
<td>Understanding Visual Art</td>
</tr>
<tr>
<td>ARTH 110</td>
<td>ART 105</td>
<td>Survey of Western Art: Prehistory through the Middle Ages</td>
</tr>
<tr>
<td>ARTH 110</td>
<td>ART 105H</td>
<td>Survey of Western Art: Prehistory through the Middle Ages Honors</td>
</tr>
<tr>
<td>ARTH 120</td>
<td>ART 106</td>
<td>Survey of Western Art: Renaissance to Contemporary</td>
</tr>
<tr>
<td>ARTH 120</td>
<td>ART 106H</td>
<td>Survey of Western Art: Renaissance to Contemporary Honors</td>
</tr>
<tr>
<td>ARTH 130</td>
<td>ART 107</td>
<td>The Art of Asia</td>
</tr>
<tr>
<td>ARTH 145</td>
<td>ART 104</td>
<td>Art of the Ancient Americas</td>
</tr>
<tr>
<td>ARTH 150</td>
<td>ART 112</td>
<td>Visual Art in the Modern Era</td>
</tr>
<tr>
<td>ARTS 100</td>
<td>ART 120</td>
<td>Two-Dimensional Design</td>
</tr>
<tr>
<td>ARTS 101</td>
<td>ART 121</td>
<td>Three-Dimensional Design</td>
</tr>
<tr>
<td>ARTS 110</td>
<td>ART 130</td>
<td>Freehand Drawing I</td>
</tr>
<tr>
<td>ARTS 200</td>
<td>ART 230</td>
<td>Beginning Life Drawing</td>
</tr>
<tr>
<td>ARTS 205</td>
<td>ART 131</td>
<td>Freehand Drawing II</td>
</tr>
<tr>
<td>ARTS 210</td>
<td>ART 135</td>
<td>Beginning Painting</td>
</tr>
<tr>
<td>ARTS 250</td>
<td>ART 170</td>
<td>Introduction to Digital Painting</td>
</tr>
<tr>
<td>ARTS 250</td>
<td>GDSN 178</td>
<td>Digital Imaging Design</td>
</tr>
<tr>
<td>ARTS 270</td>
<td>ART 124</td>
<td>Color Theory</td>
</tr>
<tr>
<td>BIOL 110B</td>
<td>BIOL 125</td>
<td>Human Anatomy</td>
</tr>
<tr>
<td>BIOL 120B</td>
<td>BIOL 226</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIOL 135S</td>
<td>BIOL 200, BIOL 201</td>
<td>Principles of Biology 1 (Molecular and Cellular Biology), Principles of Biology 2 (Diversity and Ecology)</td>
</tr>
<tr>
<td>BIOL 190</td>
<td>BIOL 200</td>
<td>Principles of Biology 1 (Molecular and Cellular Biology)</td>
</tr>
<tr>
<td>CID Descriptor</td>
<td>RHC Course(s)</td>
<td>Course Title</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------</td>
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</tr>
<tr>
<td>BUS 110</td>
<td>MGMT 101</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BUS 115</td>
<td>MGMT 208</td>
<td>Business Communications</td>
</tr>
<tr>
<td>BUS 120</td>
<td>BUSL 110</td>
<td>Legal Environment in Business</td>
</tr>
<tr>
<td>BUS 125</td>
<td>BUSL 220</td>
<td>Business Law</td>
</tr>
<tr>
<td>BUS 140</td>
<td>CIT 101</td>
<td>Introduction to Computer Information Technology</td>
</tr>
<tr>
<td>CDEV 100</td>
<td>CD 106</td>
<td>Child Growth and Development</td>
</tr>
<tr>
<td>CDEV 110</td>
<td>CD 208</td>
<td>Child, Family and Community</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>CHEM 130</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHEM 120S</td>
<td>CHEM 130, CHEM 140</td>
<td>General Chemistry I, General Chemistry II</td>
</tr>
<tr>
<td>CHEM 150</td>
<td>CHEM230</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM 160S</td>
<td>CHEM 230, CHEM 231</td>
<td>Organic Chemistry I, Organic Chemistry II</td>
</tr>
<tr>
<td>CMUS 100X</td>
<td>MUST 101</td>
<td>Introduction to Music Technology</td>
</tr>
<tr>
<td>CMUS 110X</td>
<td>MUS 165</td>
<td>Electronic Music I</td>
</tr>
<tr>
<td>CMUS 110X</td>
<td>MUST 121</td>
<td>Electronic Music I</td>
</tr>
<tr>
<td>CMUS 120X</td>
<td>MUST 145</td>
<td>Live Sound Reinforcement I</td>
</tr>
<tr>
<td>CMUS 130X</td>
<td>MUST 141</td>
<td>Recording Studio I</td>
</tr>
<tr>
<td>CMUS 150X</td>
<td>MUST 115</td>
<td>Songwriting and Arranging I</td>
</tr>
<tr>
<td>COMM 110</td>
<td>SPCH 101</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>COMM 110</td>
<td>SPCH 101H</td>
<td>Public Speaking Honors</td>
</tr>
<tr>
<td>COMM 120</td>
<td>SPCH 140</td>
<td>Argumentation and Debate</td>
</tr>
<tr>
<td>COMM 120</td>
<td>SPCH 240</td>
<td>Argumentation and Discussion</td>
</tr>
<tr>
<td>COMM 130</td>
<td>SPCH 100</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>COMM 150</td>
<td>SPCH 150</td>
<td>Intercultural Communications</td>
</tr>
<tr>
<td>COMM 160B</td>
<td>SPCH 110</td>
<td>Forensics: Speech and Debate Team</td>
</tr>
<tr>
<td>COMM 170</td>
<td>SPCH 130</td>
<td>Oral Interpretation</td>
</tr>
<tr>
<td>COMM 190</td>
<td>SPCH 240</td>
<td>Argumentation and Discussion</td>
</tr>
<tr>
<td>CID Descriptor</td>
<td>RHC Course(s)</td>
<td>Course Title</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>COMP 122</td>
<td>CIT 127</td>
<td>Python Programming I</td>
</tr>
<tr>
<td>COMP 132</td>
<td>CIT 128</td>
<td>Python Programming II</td>
</tr>
<tr>
<td>COMP 142</td>
<td>CS 142</td>
<td>Computer Architecture and Organization</td>
</tr>
<tr>
<td>ECE 120</td>
<td>CD 110</td>
<td>Principles and Practices of Early Childhood Education</td>
</tr>
<tr>
<td>ECE 130</td>
<td>CD 111</td>
<td>Early Childhood Education Curriculum</td>
</tr>
<tr>
<td>ECE 200</td>
<td>CD 114</td>
<td>Observation and Assessment</td>
</tr>
<tr>
<td>ECE 210</td>
<td>CD 228</td>
<td>Early Childhood Education Practicum</td>
</tr>
<tr>
<td>ECE 220</td>
<td>CD 102</td>
<td>Nutrition, Health and Safety for Children</td>
</tr>
<tr>
<td>ECE 230</td>
<td>CD 224</td>
<td>Diversity Issues During Early Childhood, School Age and Adolescence</td>
</tr>
<tr>
<td>ECON 201</td>
<td>ECON 102</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECON 201</td>
<td>ECON 102H</td>
<td>Principles of Microeconomics Honors</td>
</tr>
<tr>
<td>ECON 202</td>
<td>ECON 101</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 202</td>
<td>ECON 101H</td>
<td>Principles of Macroeconomics Honors</td>
</tr>
<tr>
<td>EDUC 200</td>
<td>ED 110</td>
<td>Introduction to Teaching</td>
</tr>
<tr>
<td>ENGL 100</td>
<td>ENGL 101</td>
<td>College Composition and Research</td>
</tr>
<tr>
<td>ENGL 105</td>
<td>ENGL 201</td>
<td>Advanced Composition and Critical Thinking</td>
</tr>
<tr>
<td>ENGL 105</td>
<td>ENGL 201H</td>
<td>Advanced Composition and Critical Thinking Honors</td>
</tr>
<tr>
<td>ENGL 120</td>
<td>LIT 102H</td>
<td>Approaches to Literature Honors</td>
</tr>
<tr>
<td>ENGL 120</td>
<td>LIT 102</td>
<td>Approaches to Literature</td>
</tr>
<tr>
<td>ENGL 130</td>
<td>LIT 112A</td>
<td>American Literature</td>
</tr>
<tr>
<td>ENGL 130</td>
<td>LIT 112AH</td>
<td>American Literature Honors</td>
</tr>
<tr>
<td>ENGL 135</td>
<td>LIT 112B</td>
<td>American Literature</td>
</tr>
<tr>
<td>ENGL 135</td>
<td>LIT 112BH</td>
<td>American Literature Honors</td>
</tr>
<tr>
<td>ENGL 140</td>
<td>LIT 144A</td>
<td>World Literature</td>
</tr>
<tr>
<td>ENGL 145</td>
<td>LIT 144B</td>
<td>World Literature</td>
</tr>
<tr>
<td>ENGL 160</td>
<td>LIT 146A</td>
<td>British Literature</td>
</tr>
<tr>
<td>CID Descriptor</td>
<td>RHC Course(s)</td>
<td>Course Title</td>
</tr>
<tr>
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<td>--------------</td>
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</tr>
<tr>
<td>ENGL 160</td>
<td>LIT 146AH</td>
<td>British Literature Honors</td>
</tr>
<tr>
<td>ENGL 165</td>
<td>LIT 146B</td>
<td>British Literature</td>
</tr>
<tr>
<td>ENGL 165</td>
<td>LIT 146BH</td>
<td>British Literature Honors</td>
</tr>
<tr>
<td>ENGL 180</td>
<td>LIT 114H</td>
<td>Children’s and Adolescent Literature Honors</td>
</tr>
<tr>
<td>ENGL 180</td>
<td>LIT 114</td>
<td>Children’s and Adolescent Literature</td>
</tr>
<tr>
<td>ENGL 200</td>
<td>ENGL 131</td>
<td>Creative Writing</td>
</tr>
<tr>
<td>ENGR 220</td>
<td>ENGR 212</td>
<td>Computational Methods in MATLAB/Octave</td>
</tr>
<tr>
<td>ENGR 230</td>
<td>ENGR 245</td>
<td>Engineering Mechanics: Dynamics</td>
</tr>
<tr>
<td>ENGR 260</td>
<td>ENGR 217</td>
<td>Electric Circuit Analysis</td>
</tr>
<tr>
<td>ENGR 260L</td>
<td>ENGR 217L</td>
<td>Electric Circuit Analysis Lab</td>
</tr>
<tr>
<td>GEOG 110</td>
<td>GEOG 101</td>
<td>Introduction to Physical Geography</td>
</tr>
<tr>
<td>GEOG 111</td>
<td>GEOG 101L</td>
<td>Introduction to Physical Geography Laboratory</td>
</tr>
<tr>
<td>GEOG 120</td>
<td>GEOG 102</td>
<td>Introduction to Cultural Geography</td>
</tr>
<tr>
<td>GEOG 125</td>
<td>GEOG 103</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>GEOL 100</td>
<td>GEOL 150</td>
<td>Physical Geology</td>
</tr>
<tr>
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<td>GEOL 151</td>
<td>Physical Geology Laboratory</td>
</tr>
<tr>
<td>GEOL 110</td>
<td>GEOL 152</td>
<td>Historical Geology</td>
</tr>
<tr>
<td>GEOL 110L</td>
<td>GEOL 152L</td>
<td>Historical Geology Lab</td>
</tr>
<tr>
<td>HIST 130</td>
<td>HIST 143</td>
<td>History of the United States to 1877</td>
</tr>
<tr>
<td>HIST 130</td>
<td>HIST 143H</td>
<td>History of the United States to 1877 Honors</td>
</tr>
<tr>
<td>HIST 140</td>
<td>HIST 144</td>
<td>History of the United States Since 1865</td>
</tr>
<tr>
<td>HIST 140</td>
<td>HIST 144</td>
<td>History of the United States Since 1865 Honors</td>
</tr>
<tr>
<td>HIST 150</td>
<td>HIST 101</td>
<td>History of World Civilization to the 17th Century</td>
</tr>
<tr>
<td>HIST 160</td>
<td>HIST 102</td>
<td>History of World Civilization, 1500 to the Present</td>
</tr>
<tr>
<td>HOSP 100</td>
<td>HOSP 101</td>
<td>Introduction to the Hospitality Industry</td>
</tr>
<tr>
<td>HOSP 110</td>
<td>HOSP 103</td>
<td>Sanitation and Safety</td>
</tr>
<tr>
<td>CID Descriptor</td>
<td>RHC Course(s)</td>
<td>Course Title</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>HOSP 130</td>
<td>HOSP 104</td>
<td>Introduction to Food and Beverage Management</td>
</tr>
<tr>
<td>HOSP 140</td>
<td>HOSP 102</td>
<td>Introduction to Hotel Operations</td>
</tr>
<tr>
<td>HOSP 150</td>
<td>HOSP 201</td>
<td>Hospitality Law</td>
</tr>
<tr>
<td>ITIS 110</td>
<td>CIT 180</td>
<td>PC Maintenance – A+ Certification</td>
</tr>
<tr>
<td>ITIS 150</td>
<td>CIT 210</td>
<td>Cisco Networking I</td>
</tr>
<tr>
<td>JOUR 100</td>
<td>MSCM 128</td>
<td>Mass Media in Modern Society</td>
</tr>
<tr>
<td>JOUR 110</td>
<td>JOUR 120</td>
<td>Communications Reporting and Writing</td>
</tr>
<tr>
<td>JOUR 130</td>
<td>JOUR 241</td>
<td>Newspaper Production I</td>
</tr>
<tr>
<td>JOUR 130</td>
<td>JOUR 242</td>
<td>Digital Newspaper Production I</td>
</tr>
<tr>
<td>JOUR 131</td>
<td>JOUR 243</td>
<td>Newspaper Production II</td>
</tr>
<tr>
<td>JOUR 131</td>
<td>JOUR 244</td>
<td>Digital Newspaper Production II</td>
</tr>
<tr>
<td>KIN 100</td>
<td>KIN 194</td>
<td>Introduction to Kinesiology</td>
</tr>
<tr>
<td>KIN 101</td>
<td>KIN 193</td>
<td>Standard First Aid and CPR</td>
</tr>
<tr>
<td>MATH 110</td>
<td>PSY 190</td>
<td>Statistics for the Behavioral Sciences</td>
</tr>
<tr>
<td>MATH 110</td>
<td>MATH 130</td>
<td>Statistics</td>
</tr>
<tr>
<td>MATH 110</td>
<td>MATH 130H</td>
<td>Statistics Honors</td>
</tr>
<tr>
<td>MATH 120</td>
<td>MATH 140</td>
<td>Mathematics for Elementary Teachers</td>
</tr>
<tr>
<td>MATH 140</td>
<td>MATH 170</td>
<td>Elements of Calculus</td>
</tr>
<tr>
<td>MATH 150</td>
<td>MATH 160</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MATH 155</td>
<td>MATH 180</td>
<td>Pre-Calculus</td>
</tr>
<tr>
<td>MATH 210</td>
<td>MATH 190H</td>
<td>Calculus I Honors</td>
</tr>
<tr>
<td>MATH 210</td>
<td>MATH 190</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH 220</td>
<td>MATH 191</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH 230</td>
<td>MATH 250</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MATH 240</td>
<td>MATH 270</td>
<td>Differential Equations</td>
</tr>
<tr>
<td>MATH 250</td>
<td>MATH 260</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>CID Descriptor</td>
<td>RHC Course(s)</td>
<td>Course Title</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>MATH 851</td>
<td>MATH 175</td>
<td>Plane Trigonometry</td>
</tr>
<tr>
<td>MATH 900S</td>
<td>MATH 190</td>
<td>Calculus I and Calculus II</td>
</tr>
<tr>
<td>MATH 900S</td>
<td>MATH 191</td>
<td>Calculus I Honors and Calculus II</td>
</tr>
<tr>
<td>MUS 100</td>
<td>MUS 133</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>MUS 110</td>
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More courses may have been approved for C-ID since the publication of this catalog. You can also see C-ID approvals for Rio Hondo College at ASSIST.org or C-ID.net.
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COURSE SCHEDULE FREQUENCY

This chart lists active courses that are regularly taught. For active courses not on this list, please contact the appropriate division office to inquire about specific course scheduling.

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Courses of Instruction

Accounting (ACCT) ............................................................... 283
Administration of Justice (AJ) ........................................... 285
Alternative Energy Technology (AET) ................................. 286
American Sign Language (ASL) ........................................... 288
Animation (ANIM) ................................................................ 290
Anthropology (ANTH) .......................................................... 291
Architecture (ARCH) ......................................................... 292
Art (ART) ............................................................................. 294
Associate Degree Nursing (ADN) ....................................... 300
Astronomy (ASTR) ............................................................... 303
Automotive Technology (AUTO) .......................................... 304
Biology (BIOL) ...................................................................... 313
Biotechnology (BIOT) .......................................................... 316
Business Law (BUSL) .......................................................... 316
Carpentry (CARP) ............................................................... 316
Chemistry (CHEM) .............................................................. 327
Chicano Studies (CHST) ...................................................... 328
Child Development (CD) ..................................................... 329
Chinese (CHIN) .................................................................... 332
Civil Design (CIV) ............................................................... 332
Computer Information Technology (CIT) .............................. 333
Computer Science (CS) ....................................................... 338
Cooperative Work Experience-General (CWEG) .................... 338
Corrections (CORR) ............................................................ 338
Counseling (COUN) ............................................................. 340
Dance (DANC) ...................................................................... 341
Economics (ECON) .............................................................. 344
Education (ED) ..................................................................... 344
Education Development (EDEV) .......................................... 345
Electronics (ELEC) .............................................................. 347
Emergency Medical Technician (EMT) ................................. 350
Engineering (ENGR) ............................................................ 350
Engineering Technology (ENGT) ......................................... 351
English (ENGL) ..................................................................... 353
English As A New Language (ENLA) ................................. 355
Environmental Technology (ET) .......................................... 356
Finance (FIN) ...................................................................... 360
Fire Academy (FAC) ........................................................... 361
Fire Technology (FTEC) ...................................................... 363
First Year Seminar (FYS) ..................................................... 365
French (FR) .......................................................................... 366
Geographic Information Systems (GIS) ............................... 367
Geography (GEOG) ............................................................. 369
Geology (GEOL) ................................................................... 369
Graphic Design (GDSN) ....................................................... 370
Health Science (HS) ............................................................. 372
Heat & Frost (HEFR) ............................................................ 373
Heavy Equipment Technology (HET) ................................... 374
History (HIST) ....................................................................... 377
Homeland Security (HMLD) .............................................. 380
Hospitality (HOSP) ............................................................. 381
Human Services (HUSR) ..................................................... 381
Humanities (HUM) ............................................................. 383
Japanese (JAPN) ................................................................. 383
Journalism (JOUR) .............................................................. 384
Kinesiology Theory (KIN) ................................................... 385
Kinesiology (KINA) ............................................................ 389
Landspace (LAND) .............................................................. 394
Latin (LATN) ......................................................................... 395
Library (LIB) .......................................................................... 395
Literature (LIT) ....................................................................... 395
Logistics (LOG) ....................................................................... 400
Management (MGMT) .......................................................... 401
Marketing (MRKT) .............................................................. 403
Mass Communications (MSCM) ......................................... 403
Mathematics (MATH) ........................................................... 404
Music (MUS) ......................................................................... 410
Music Technology (MUST) ................................................... 415
Noncredit Courses .............................................................. 445
Nursing (ADN), (HS), (VN) ................................................ 300, 372, 439
Nutrition Science (NUTR) .................................................... 416
Operating Engineers (OENG) .............................................. 417
Orthopedic Technology (ORTH) ......................................... 418
Philosophy (PHIL) .............................................................. 419
Photography (PHTO) ............................................................ 421
Physics (PHY) ........................................................................ 422
Police Academy (PAC) ....................................................... 423
Political Science (POLS) ....................................................... 425
Psychology (PSY) ............................................................... 426
Radio (RDIO) ........................................................................ 428
Reading (READ) ................................................................. 429
Sociology (SOC) ..................................................................... 430
Spanish (SPAN) ................................................................. 431
Speech (SPCH) ................................................................. 433
Technical Education (TCED) ............................................... 434
Television (TV) ....................................................................... 435
Theatre (THTR) ................................................................. 435
Vocabulary (VOCB) ............................................................ 439
Vocational Nursing (VN) ..................................................... 439
Welding (WELD) ................................................................. 441
Wildland Fire Technology (WFT) ......................................... 443
ACCOUNTING
Division of Business

ACCT 100
Introduction to Accounting
Advisory: READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; MGMT 052
Transfers to: CSU
This course provides basic knowledge of accounting terms, concepts, and procedures for a sole proprietorship form of business. Topics include the analysis and recording of business transactions for service and merchandising firms, and the preparation of simple financial statements.
72 Lecture hours
4 Units

ACCT 101 (C-ID ACCT 110)
Financial Accounting
Advisory: READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; ACCT 100; MGMT 052
Transfers to: UC, CSU
This course is the study of accounting as an information system and how information is used by investors, creditors, and other external users to make decisions. The course covers the accounting information system, including recording and reporting of business transactions with a focus on the accounting cycle, the application of generally accepted accounting principles, financial statements, and statement analysis. Topics include issues relating to asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, and ethics. This course is required of all accounting and business administration majors. This course is intended for students eligible for the Honors Program.
4 Units
72 Lecture hours

ACCT 102 (C-ID ACCT 120)
Managerial Accounting
Prerequisite: ACCT 101
Advisory: READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: UC, CSU
This course introduces students to the fundamentals of managerial accounting for decision making. This course is the study of how managers use accounting information in decision-making, planning, directing and controlling operations. The course focuses on the flow of costs in a manufacturing environment, cost terms and concepts, cost behavior, cost structure and cost-volume-profit analysis. Topics include issues relating to cost systems, cost control, profit planning, and performance analysis in manufacturing environments. This course is required of all accounting and business majors.
4 Units
72 Lecture hours

ACCT 103
Payroll Accounting
Advisory: READ 043 or appropriate placement; ACCT 100 or 101
Transfers to: CSU
This course combines basic accounting skills with specialized training in payroll accounting to prepare students for entry-level positions within the payroll segment of accounting. This course is designed for accounting majors and those interested in pursuing an entry-level position within the payroll segment of accounting. This course is a comprehensive overview of federal and state payroll laws and their effect on payroll records and required government reports.
4 Units
72 Lecture hours

ACCT 104
Introduction to Governmental and Not-for-Profit Accounting
Prerequisite: ACCT 101
Advisory: READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; MGMT 052
Transfers to: CSU
This course is an introduction to the fundamentals of governmental and not-for-profit accounting. The emphasis of the course will be placed on accounting for various fund types and restrictions relevant to government and not-for-profit agencies with both theoretical and practical aspects explored. Topics include budgets, revenues, expenditures, tax levies, appropriations, general fund, special fund, and financial statements for government and not-for-profit entities. This course is designed for students interested in furthering their educational requirements for the CPA exam and/or pursuing an entry-level position in government and not-for-profit accounting.
3 Units
54 Lecture hours
ACCT 107
Accounting Ethics
Prerequisite: ACCT 101
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is an introduction to professional ethics in the accounting and business environments. This course will cover principles and core philosophies of ethics by examining accountants' role in different aspects of the accounting profession such as auditing, management and taxation. It will prepare students to develop their framework for making ethical decisions in their profession by learning how to ask questions and analyze ethical issues encountered in the accounting field. This course is designed for students pursuing an accounting certificate or degree, and for students looking to satisfy the accounting ethics requirement for the CPA exams.
3 Units
54 Lecture hours

ACCT 108
Volunteer Income Tax Assistance Program I
Advisory: READ 043 or appropriate placement; ACCT 105
Transfers to: CSU
This is the first course in a sequence of two courses designed for students who want to be a part of the Volunteer Income Tax Assistance (VITA) program at Rio Hondo. This course will cover Federal and California tax theories and laws appropriate for the current tax year, and students will apply their knowledge by taking the IRS exams for VITA volunteers. Upon successful completion of the IRS VITA Basic and Intermediate exams, the students will be able to assist low-income individuals and families with tax return preparation through the VITA program for the current year.
1 Unit
18 Lecture hours

ACCT 109
Volunteer Income Tax Assistance Program II
Prerequisite: ACCT 108
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This is the second course in a sequence of two courses designed for students who want to volunteer in the Volunteer Income Tax Assistance (VITA) program at Rio Hondo. This course will allow students who have successfully passed ACCT 108 to apply their tax knowledge by assisting low-income individuals and families with tax return preparation through the VITA program for the current year. Students will learn to use the TaxWise software to accurately file individual federal and state income tax returns within the scope of the VITA program. Students will learn how to develop a system of quality control for actual taxpayer returns as well as develop their communication skills through interviews of taxpayers and explanation of tax return results.
1 Unit
9 Lecture Hours
27 Lab hours

ACCT 110
Excel for Business and Accounting
Prerequisite: ACCT 101
Advisory: CIT 107
Transfers to: CSU
This course is designed for individuals seeking to enhance entry level Microsoft Excel spreadsheet skills in a business and accounting environment. Students will learn how and why Excel is used for analyzing data, managing budgets, forecasting and modeling financial performance in business.
1 Unit
13.5 Lecture hours
13.5 Lab hours

ACCT 203
Introduction to Cost Accounting
Prerequisite: ACCT 101
Advisory: READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
Introduction to Cost Accounting takes a logical approach to the fundamentals of cost accounting as applied to a manufacturing business, and the use of cost data in management decisions. Principles and procedures of cost systems are presented first in an overview, then discussed and illustrated in detail. The course provides thorough coverage of job order costing, process costing, and standard costs. Analysis of cost data is integrated with discussions of cost accounting systems and procedures. Students will also evaluate both quantitative and qualitative data to assist management with strategic decision-making, planning, and controlling. This course is designed for accounting majors and those interested in furthering their knowledge and understanding of managerial accounting.
3 Units
54 Lecture hours

ACCT 299
Directed Study: Accounting
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours

Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.

ACCT 299
Directed Study: Accounting
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours
This course is designed to provide Administration of Justice or other interested students with an in-depth study of the legal responsibilities of the criminal justice system. Topics include laws of arrest, custod y, past, present, and future analysis of the procedures for each subsystem within the administration of justice system from initial entry to final disposition. The relationship each segment maintains with system members will also be covered.

3 Units
54 Lecture hours

AJ 104 (C-ID AJ 124)
Legal Aspects of Evidence
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: CSU
This course is designed to provide Administration of Justice or other interested students with an in-depth study of evidence rules. An emphasis will be placed on the application of rules in preparing and presenting evidence. The course will discuss the history and approach to the study of evidence. Topics include proof by evidence and substitutes, general admissibility tests, evidence by way of witness testimony, documents, real evidence, and exclusion of evidence on constitutional grounds. For a better understanding of the evidence rules, judicial decisions are cited and students will be required to brief cases.

3 Units
54 Lecture hours

AJ 105 (C-ID AJ 160)
Community Relations/MultiCultural Issues Within Public Service
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: UC, CSU
This course examines the complex, dynamic relationship between communities and the justice system in addressing crime and conflict within a diverse multicultural population. Topics covered may include crime prevention, restorative justice, conflict resolution, and ethics.

3 Units
54 Lecture hours

AJ 106 (C-ID AJ 120)
Criminal Law I
Prerequisite: AJ 101 or completion of PAC 040 or equivalent
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: UC (credit limit*), CSU
(*Students will receive credit from UC for only one of the following courses: AJ 106 or AJ 107.)
This course offers an analysis of the doctrines of criminal liability in the United States and the classification of crimes against persons, property, morals, and public welfare. Special emphasis is placed on the classification of crime, the general elements of crime, the definitions of common and statutory law, and the nature of acceptable evidence. This course utilizes caselaw and case studies to introduce students to criminal law. The completion of this course offers a foundation upon which upper-division criminal justice courses will build. The course will also include some limited discussion of prosecution and defense decision making, criminal culpability, and defenses to crimes.

3 Units
54 Lecture hours

AJ 107
Criminal Law II
Prerequisite: AJ 101 or completion of PAC 040 or equivalent
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit from UC for only one of the following courses: AJ 106 or AJ 107.)
This course is designed to provide Administration of Justice or other interested students with a comprehensive discourse on criminal statutes and their definition. Topics include classification as applied to the system of administration of justice, crimes against persons, property, general statutes, and health and safety statutes as well as other state and federal laws.

3 Units
54 Lecture hours

AJ 207 (C-ID AJ 220)
Juvenile Law and Procedure
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: CSU
This course is designed to provide Administration of Justice or other interested students with techniques for handling juvenile offenders and victims. An emphasis will be placed on the prevention and repression of delinquency, diagnosis and referral of juvenile offenders, and organization of community resources. Juvenile law and juvenile court procedures will be contrasted with adult law procedures.

3 Units
54 Lecture hours
AJ 208 (C-ID AJ 140)
Principles of Investigation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: CSUI
This course addresses the techniques, procedures, and ethical issues in the investigation of crime, including organization of the investigative process, crime scene searches, interviewing and interrogating, surveillance, source of information, utility of evidence, scientific analysis of evidence, and the role of the investigator in the trial process.
3 Units
54 Lecture hours

AJ 215
Vice and Narcotics Control
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: CSUI
This course is designed to provide Administration of Justice or other interested students with an in-depth understanding of code and case law of vice and narcotics. The course will focus on detection, suppression, apprehension, and prosecution of violators. Special emphasis will be placed on laws dealing with gambling, prostitution, sex crimes, narcotic identification, and search and seizure.
3 Units
54 Lecture hours

AJ 228
Police Field Operations
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101
Transfers to: CSUI
This course is designed to provide Administration of Justice or other interested students with an in-depth understanding of the history and development of Police Field Operations. Particular emphasis is placed on the planning of field activities. Topics include the functions of patrol, traffic and other preliminary investigative duties of the field officer. The techniques of planning for patrol operations, handling of requests for service, vehicular traffic-related problems, and civil and domestic disturbances are also presented in the course.
3 Units
54 Lecture hours

AJ 250
Contemporary Issues in the Criminal Justice System
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AJ 101; AJ 102
Transfers to: CSUI
This course is designed to provide Administration of Justice or other interested students with an in-depth understanding of personal and organizational values, beliefs, attitudes and ethics as they affect contemporary issues in the Criminal Justice System. Particular emphasis is placed on the historical foundations which serve as a basis of contemporary decision making. Specific issues to be used in the discussions will vary from semester to semester.
3 Units
54 Lecture hours

AJ 275 (C-ID AJ 150)
Introduction to Forensic Science
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSUI
This course is designed to prepare Administration of Justice, Forensic Science, and California Peace Officer students for the Forensic Science Identification Program. This course provides an introduction to the role of forensics in criminal investigations. It examines the methods utilized in the forensic analysis of crime scenes, pattern evidence, instruments, firearms, questioned documents and controlled substances.
3 Units
54 Lecture hours

AJ 290
Cooperative Work Experience/Internship for Administration of Justice Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSUI
This course supports and reinforces on-the-job training in the Administration of Justice field under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in the area of Law Enforcement and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of Law Enforcement or Administration of Justice and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

AJ 299
Directed Study: Administration of Justice
Transfers to: CSUI
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 3 Units
54 to 162 Lab hours

ALTERNATIVE ENERGY TECHNOLOGY
Division of Career & Technical Education

AET 120
Introduction to Alternative Energy Technology (Same as ET 120)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 033 or MATH 033B or appropriate placement
Transfers to: CSUI
This course is an introductory course to provide students with working knowledge of present day energy systems, which will include an in-depth analysis of the design and installation of alternate energy systems. Topics will include: solar electrical systems, wind electrical systems, solar water heating systems, wind mechanical systems, small hydro-electrical systems, geothermal
AET 121 Photovoltaic Systems Design and Installation (Same as ET 121)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is an introductory course that will examine and implement the design and installation of solar photovoltaic systems, which will include the installation of a working solar photovoltaic power system. Students will learn how to perform solar site evaluations, electrical load calculations, solar system size calculations, and installation techniques for grid-tie and off-the-grid photovoltaic systems. This course is designed to prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Exam. This course is intended for students that are contemplating a career in the solar photovoltaic energy industry.
3 Units
45 Lecture hours
27 Lab hours

AET 122 Advanced Photovoltaic Systems Design and Installation (Same as ET 122)
Prerequisite: AET/ET 121
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is the second course in the photovoltaic series that will further examine and implement the design and installation of solar photovoltaic power systems. Students will learn how to interpret the National Electrical Code (NEC) specifics concerning photovoltaic installations. The topics include code compliant wiring of modules, inverters, charge controllers, batteries, grounding techniques and related topics. Additional topics include the design and installation of large commercial photovoltaic systems. This course is intended for students that are interested in a career in the solar photovoltaic energy industry.
3 Units
45 Lecture hours
27 Lab hours

AET 123 Wind Energy Systems Design and Installation (Same as ET 123)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is an introductory course that will examine and implement the design and installation of wind power systems which will include the installation of a working wind generation power system. Students will learn how to perform wind site evaluations, electrical load calculations, wind system size calculations, hydraulics fundamentals, basic aerodynamics, and installation techniques for wind power generation systems. Students will learn how to design and install wind power generation system and obtain skills for employment. This course is intended for students that are contemplating a career in the wind turbine power generation industry.
3 Units
45 Lecture hours
27 Lab hours

AET 124 Advanced Wind Energy Systems Design and Installation (Same as ET 124)
Prerequisite: AET/ET 123
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is the second course in the wind energy series that will further examine and implement the design and installation of wind power systems. Students will learn how to interpret the National Electrical Code (NEC) specifics concerning wind power installations. The topics include code compliant wiring of modules, inverters, charge controllers, grounding techniques and related topics. Additional topics include wind site evaluations, electrical load calculations, wind system size calculations, hydraulic fundamentals, basic aerodynamics, and installation techniques for large wind power generation systems. This course is intended for students that are contemplating a career in the wind turbine power generation industry.
3 Units
45 Lecture hours
27 Lab hours

AET 125 Energy Storage Systems
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or MATH 033B or appropriate placement
Transfers to: CSU
This course provides an introductory overview of energy storage systems. Students will obtain a working knowledge of electric/hybrid vehicles, fast battery charging, smart grids, and microgrids. Renewable energy (solar and wind), peak shaving, and reduction of energy consumption will also be discussed. Students will design and build a renewable energy system with an energy storage solution. This course is intended for students considering a career in the renewable energy industry.
3 Units
45 Lecture hours
27 Lab hours

AET 126 Solar PV Technical Sales
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030B or appropriate placement
Transfers to: CSU
This course is designed to provide students with the knowledge and skills of solar photovoltaic (PV) design and sales techniques. The course covers basic solar fundamentals, site evaluation, shade analysis, consumer electric rates, benefits of PV, return on investment, sizing, and electrical and mechanical design considerations. This course will provide students with the design and sales skills needed to become solar professionals, as well as prepare them for the NABCEP PV Technical Sales Professional Exam.
3 Units
54 Lecture hours

AET 181 Home Energy Management and Audit-ing (Same as ET 181)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed to provide individuals, who are working in or seeking employment in the green energy field, with an overview of home energy management and auditing. Specifically, this course will assist students in their preparation of a comprehensive home energy audit and energy management program. Emphasis is placed on the following topics: Appliances, Insulation, Designing/Remodeling, Electricity, Landscaping, Lighting, Space Heating and Cooling, Water Heat-
AET 280
Green Building Design Principles
(Same as ET 280)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement Transfers to: CSU
This course is designed to provide individuals, who are working in or seeking employment in the green building field, with an overview of the green building industry and its components. Specifically, this course will assist students in their preparation for the Leadership in Energy and Environmental Design Accredited Professional (LEED AP) Examination, which is the most recognized professional accreditation for green building in the nation. Emphasis is placed on the six categories of design that green buildings must address for LEED Certification: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality, and Innovation & Design Process. Each of these categories will be studied, with a focus on the significance of each particular credit.
3 Units
54 Lecture hours

AET 299
Directed Study in Alternative Energy Technology
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Alternative Energy Technology beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

AMERICAN SIGN LANGUAGE
Division of Communication & Languages

ASL 101 (Formerly ASL 149)
American Sign Language I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement Transfers to: UC, CSU
This course will provide an introduction to American Sign Language emphasizing receptive and expressive skills. The use of facial expressions during signing will also be addressed. Students will be exposed to deaf culture experiences both in the classroom and in other environments. In addition to classroom discussion, students will receive intensive individualized practice in the language laboratory via interactive websites, video programs, and CD ROMs. This course is designed for people who wish to learn to communicate with those who are deaf and hard of hearing.
4 Units
72 Lecture hours

ASL 120
Introduction to Deaf Studies
Prerequisite ASL 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement Transfers to: CSU
This course introduces students to the basic information of the American Deaf experience in the United States: Deaf community/culture and American Sign Language. This course exposes students to the history, contributions and contemporary lives of Deaf people in America. This course is interdisciplinary in that it introduces a range of issues that are developed in the purview of Deaf Studies — linguistics, education, sociology, psychology and other fields. This course will be taught using a combination of ASL and spoken English and may or may not have interpreters facilitating the lectures depending on the instructor.
3 Units
54 Lecture hours
ASL 124
Deaf Culture
Corequisite: ASL 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course will cover basic information and research on Deaf culture, deaf children and their upbringing, Deaf education, the importance of American Sign Language (ASL) to the Deaf community, Deaf societies around the world and technological advances/usage of people who are deaf or hard of hearing. Focus will be on research and progress within the Deaf culture. This course will be taught using a combination of ASL and spoken English and may or may not have interpreters facilitating the lectures depending on the instructor.
3 Units
54 Lecture hours

ASL 201
American Sign Language III
Prerequisite: ASL 102
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course will focus on refining the student’s knowledge of the ASL grammatical structure and the lexicon of American Sign Language related to its historical, artistic, and cultural influence in mainstream society with emphasis on receptive/expansive conversational and cultural skills for communication. In addition to classroom discussion, students will receive intensive individualized practice in the language laboratory via interactive websites, video programs, and CD ROMs.
4 Units
72 Lecture hours

ASL 202
American Sign Language IV
Prerequisite: ASL 201
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
Continuation from ASL III (ASL 201). This course will focus the use of American Sign Language in practical applications through discussing relevant topics like math, current events, arts, and various other topics with an emphasis on applying the language in real-world interactions. In addition to classroom discussion, students will receive intensive individualized practice in the language laboratory via interactive websites, video programs, and CD ROMs.
4 Units
72 Lecture hours

ASL 211
Beginning Interpreting + Ethics 1
Prerequisite: ASL 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
In this course, students survey basic theories, principles, and practices of interpreting/transliterating, including basic ethical considerations, a historical overview of the interpreting profession, and discuss the professional role of the interpreter. Students begin the development of interpreting/transliterating processing skills. This course will be taught using a combination of ASL and spoken English, and may or may not have interpreters facilitating the lectures depending on the instructor.
3 Units
54 Lecture hours

ASL 212
Beginning Interpreting + Ethics 2
Prerequisite: ASL 201, 211
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
In this course, students will continue to learn theories, principles, and practices of interpreting/transliterating including more complex ethical considerations, a current overview of the interpreting profession, and discuss the professional role of the interpreter in today’s workforce. This course is designed to allow students to pursue a degree in ASL interpreting. This course will be taught using a combination of ASL and spoken English and may or may not have interpreters facilitating the lectures depending on the instructor.
3 Units
54 Lecture hours

ASL 220
Pathways to Interpreting Careers
Prerequisite: ASL 201, 211
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
In this course students will learn business practices in the profession of interpreting. They will explore various career paths available to ASL interpreters from staff positions to independent contractors. Students will learn legal considerations within the state of California and beyond as they apply to interpreting. This course will be taught using a combination of ASL and spoken English and may or may not have interpreters facilitating the lectures depending on the instructor.
2 Units
36 Lecture hours

ASL 250
ASL Linguistics
Prerequisite: ASL 102
Advisory. ENGL 101
Transfers to: CSU
This course will serve as an introductory course in linguistics, with a special emphasis on American Sign Language (ASL). Students will learn basic linguistic concepts such as phonology, morphology, and syntax as they apply to all languages. Students will further their knowledge of linguistics as it relates specifically to ASL. No prior knowledge of linguistics is needed to take this course. Upon completion of this course students will be able to pursue careers related to Deaf education or ASL pedagogy. This course will be taught using a combination of ASL and spoken English and may or may not have interpreters facilitating the lectures depending on the instructor.
3 Units
54 Lecture hours

ASL 270
ASL Literature
Prerequisite: ASL 201
Advisory: ASL 250; ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course will take students on a journey through the history and current status of the literary body of American Sign Language (ASL). This is a rare opportunity to explore a body of literature in its infancy stages. Students will analyze videos and books created or written by ASL poets or authors. Word choices, deeper meanings, and metaphors used will be discussed. This course will be taught using a combination of ASL and spoken English and may or may not have interpreters facilitating the lectures depending on the instructor.
3 Units
54 Lecture hours

ASL 280
ASL Storytelling
Prerequisite: ASL 124, ASL 201
Advisory. ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to further refine the student’s knowledge and mastery of American Sign Language (ASL) through the practical application of storytelling. Students will study master storytellers and analyze their techniques. Upon completion of this course, students will have created multiple original stories in ASL. These are necessary skills to achieve fluency in ASL.
2 Units
36 Lecture hours
ANIM 110
Introduction to Digital 3D Animation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is an introduction to the art of creating digital character animation. Students will be introduced to the concepts of digital sculpting, lighting, rendering, rigging and animating 3-D objects. This course is beneficial for all students in classes related to Graphic Arts (Multimedia, Illustration, Web and Game Design and Film Production) and Industrial Design (Architectural, Automotive, Furniture, Clothing and Product Design).

4 Units
54 Lecture hours
54 Lab hours

ANIM 105
Principles of Digital Animation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; ART 130; ART 230
Transfers to: CSU
This course introduces students to the basic principles of digital animation. The topics covered in this course are the starting point for any student interested in becoming a digital animator. Through the use of solid drawing and 3D software such as Maya, students will learn to master fundamentals like squash and stretch, timing, weight, drag and follow through. This course provides students with the opportunity to build and refine the basic skill set necessary to be a digital animator.

4 Units
54 Lecture hours
54 Lab hours

ANIM 110
Digital Character Animation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ANIM 105
Transfers to: CSU
This course will provide students with an opportunity to further develop their skills in the art of creating three-dimensional digital character animation. Students will learn how to create short animation sequences and loops using digital characters. This course is appropriate and beneficial for all students in courses related to graphic arts (such as those that focus on multimedia, internet web design, game design, and broadcast media production) and industrial design (including architecture, automotive, furniture, clothing, and product design). Students will be introduced to the use of storyboards and relevant concepts related to body mechanics, acting for animators, pose-to-pose and straight ahead animation, control rigging, and animating mechanical subject matter.

4 units
54 Lecture hours
54 Lab hours

ANIM 120
Lighting and Texture
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ANIM 101
Transfers to: CSU
This is an introductory course for all students interested in learning about lighting, rendering and texturing for 3D animation. Students focus on creating lighting scenarios and texture editing systems to generate and render surface details on a variety of 3D objects. This course is beneficial for all students in courses related to Graphic Arts (Multimedia, Illustration, Internet Web Design, Game Design and Film Production) and Industrial Design (Architectural, Automotive, Furniture, Clothing and Product Design).

4 Units
54 Lecture hours
54 Lab hours

ANIM 130
Modeling for Games
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ANIM 101
Transfers to: CSU
This is an introductory course in the creation of assets and environments for games. The course focuses on the creation of forms to be integrated into a game, and students will begin to grasp the design and digital sculpting of both organic and hard surface game assets. Aesthetics, construction, communication, light, form and quality of work are stressed. This course is beneficial for all students in courses related to Graphic Arts, Multimedia, Illustration, Internet Web Design, Game Design, Film Production, Industrial Design, Architectural, Automotive, Furniture, Clothing and Product Design.

4 Units
54 Lecture hours
54 Lab hours

ANIM 133
Character Design
Prerequisite: ANIM 260
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ART 170
Transfers to: UC, CSU
This course is intended to teach the fundamentals of character design. Students learn the basics in character development by revising and polishing innovative designs of visually intriguing characters. The course helps students master and use gesture, construction and anatomy in their designs. Students learn to use digital tools to sketch, paint and build a visually compelling portfolio of characters.

4 Units
54 Lecture hours
54 Lab hours

ANIM 134
Mech and Vehicle Design
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ART 170
Transfers to: UC, CSU
This class is geared towards designing mechs and vehicles of all types for the entertainment industry. Centered on digital drawing and rendering using Photoshop, students create and present finished portfolio pages. The course takes students through a clear and efficient design process emphasizing storytelling, gesture, shape, and color.

4 Units
54 Lecture hours
54 Lab hours

ANIM 135
Environment Design
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ANIM 101
Transfers to: UC, CSU
This class introduces students to the artistic and technical requirements needed to work in the entertainment industry as environment artists. Through class projects, students learn the latest techniques in the creation of game levels using Maya and Unity. In addition to level design and the practical aspects of modeling and lighting, an emphasis is placed on the artistic merit of the student’s work through value, color, design and composition.

4 Units
54 Lecture hours
54 Lab hours

ANIM 140
Animation Portfolio
Prerequisite: ANIM 101; ANIM 105
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course will prepare digital artists to talk about and present their artwork in a professional manner. Students will select an area of concentration within Entertainment Design to focus a portfolio project around. Using programs such as Photoshop CC, Premier CC, ZBrush, Maya and the Unity game engine students...
will create an online portfolio. This course is an excellent opportunity for students interested in developing and presenting a body of work that will help them take the next step in their professional career.

4 Units
54 Lecture hours
54 Lab hours

ANTHROPOLOGY
Division of Behavioral & Social Sciences

ANTH 101 (C-ID ANTH 110)
Introduction to Physical Anthropology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
*Transfers to: UC (credit limit); CSU (*Students will receive credit for only one of the following courses: ANTH 101 or ANTH 101H)

In this course, people are investigated from the perspective of evolutionary theory. Students will learn about the process of natural selection and related issues including patterns of inheritance. Also included will be an examination of the closest living relatives to humans, primates, with an emphasis on behavior and ape societies. An extensive survey of human ancestors will trace the origins of various life forms and recount how ape-like creatures evolved into modern humans. Students will also discover how natural selection can be used as a tool to understand patterns of human variation. This course is designed for anthropology majors, those with an interest in anthropology, or anyone with a desire to further their understanding of humans from an evolutionary perspective.

3 Units
54 Lecture hours

ANTH 101L (C-ID ANTH 115L)
Physical Anthropology Lab
Prerequisite/Corequisite: ANTH 101 or ANTH 101H
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This laboratory course, designed to complement the lecture course, is for students interested in expanding their knowledge of physical anthropology. Students will be introduced to the methods, techniques, and procedures used in physical anthropology research, gaining practical experience by participating in laboratory activities and experiments employing the scientific method. Laboratory exercises will include an assessment of the forces that affect evolutionary change, the observation of primate behavior, the assessment of human variation, and the identification and classification of the skeletal features of humans, non-human primates, and human ancestors. Also included will be an exploration of Mendelian, molecular, and population genetics.

1 Unit
54 Lab hours

ANTH 102 (C-ID ANTH 120)
Introduction to Cultural Anthropology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

The emphasis of this general education course is the investigation of human culture. By learning about the diversity of cultural practices around the world, students will be able to evaluate their identities within their own societies. In addition to discovering the theories and methods important to cultural anthropology, the course will include an extensive examination of cross-cultural diversity. Students will learn about how people in different cultures obtain their food, exchange goods, organize themselves in groups, engage in politics, raise children, and worship supernatural beings. Also addressed will be the issue of how cultural anthropology can contribute to addressing problems important in the modern world. This course is designed for anthropology majors, those with an interest in anthropology, or anyone with a desire to further their understanding of human culture. This course is intended for those who meet Honors Program requirements.

3 Units
54 Lecture hours

ANTH 102H (C-ID ANTH 120H)
Introduction to Cultural Anthropology Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU

The emphasis of this general education course is the investigation of human culture. By learning about the diversity of cultural practices around the world, students will be able to evaluate their identities within their own societies. In addition to discovering the theories and methods important to cultural anthropology, the course will include an extensive examination of cross-cultural diversity. Students will learn about how people in different cultures obtain their food, exchange goods, organize themselves in groups, engage in politics, raise children, and worship supernatural beings. Also addressed will be the issue of how cultural anthropology can contribute to addressing problems important in the modern world. This course is designed for anthropology majors, those with an interest in anthropology, or anyone with a desire to further their understanding of human culture.

3 Units
54 Lecture hours

ANTH 103 (C-ID ANTH 150)
Introduction to Archaeology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

Archaeology is the study of past societies through the analysis of material remains. This general education course will survey the development of major cultural centers around the world including those found in Mesoamerica, South America, Egypt, China, Africa, and the Middle East. Examples drawn from many ancient sites will trace human societies from pre-agricultural communities, through the origins of agriculture, to the rise of major political and economic institutions. Students will learn how archaeologists discover information about the past, the history of the discipline, and the important issues confronting the field today. This course is designed for anthropology majors, those with an interest in anthropology, or anyone with a desire to further their understanding of human culture.

3 Units
54 Lecture hours
course is designed for students who are interested in the field of anthropology or for students who plan to major in anthropology.

3 Units
54 Lecture hours

ANTH 104 (C-ID ANTH 130)
Introduction to Language and Culture
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students majoring in anthropology or anyone interested in learning about the diversity of communication forms and language systems around the world. The course investigates the development and evolution of language, the structure and the sound systems of different languages, language loss and conservation, and the variations in different languages such as dialects and the social situations in which they are used. The different forms of verbal and non-verbal communication are studied across cultures with special attention paid to the use of technology like social media and the problems that arise in communication between people of different class, gender, and ethnicity in our globalized world.

3 Units
54 Lecture hours

ANTH 110
Human Sexuality from a Cross-Cultural Perspective (Same as SOC 110)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students with an interest in human sexuality from a cross-cultural perspective. Sexual anatomy, development, response, and behavior will be examined, along with historical and cultural patterns. Students will learn about the development and expression of gender and orientation from both Western and non-Western perspectives, with an emphasis on the influence of culture on individuals.

3 Units
54 Lecture hours

ANTH 115
Introduction to Medical Anthropology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
Medical anthropology explores the perceptions of disease, health, and healing in different cultures around the world. Socio-cultural, biological, and ecological perspectives will be used to understand the origins of illness and disease and medical practices across cultures. Topics include diagnosis and therapies, the role of healers like witch doctors and shamans, stress and mental health, unequal access to medical care, and medical anthropology applied to global health problems. This course is intended for nursing and health care professionals seeking continuing education credit and students interested in the cultural aspects of healing and treating disease.

3 Units
54 Lecture hours

ANTH 125
Religion, Magic, Witchcraft, and the Supernatural
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students interested in learning about the diverse religious beliefs and practices around the world. An introduction to the anthropological study of religion will include an overview of the various forms of religious belief systems, the variety of gods and other supernatural forces, the use of myths, rituals, and ceremonies in religious practice, and the types of shamans, priests, and other religious specialists found in religious systems. The religious use of drugs will be explored along with traditional healing practices and folk medicine remedies used in many Western cultures. A survey of witchcraft, sorcery, the occult, demons, exorcism rites, sacrificial practices, and magic will be included. In addition, concepts relating to death and the afterlife will be explored such as souls, ghosts, reincarnation, zombies, and others.

3 Units
54 Lecture hours

ARCHITECTURE
Division of Career & Technical Education

ARCH 110
Construction Document Reading and Estimating
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed for students who have taken at least two years of high school drafting and are interested in the field of architecture. This introductory course is for any student interested in the field of Architectural Drawing and Design. The course is a requirement for both the A.S. degree and certificate in Architectural Design and Drawing, Engineering Design Drafting and Civil Design Technology. The course includes the study of architectural graphic standards related to creating construction drawings such as floor plans, exterior and interior elevations, site plans, foundation plans and details, building sections and construction framing details for one or two story residential structure. Emphasis is placed on symbolism, conventions, and techniques to develop technical skills necessary for an entry level architectural drafter and may lead to careers in environmental planning and design, architectural engineering, and construction technology. Construction methods, building codes, design factors, planning, and use of reference materials are discussed and applied. All construction documents will be developed using traditional board drafting methods and standards.

4 Units
54 Lecture hours
54 Lab hours

ARCH 125
Residential Architecture and Detailing
Prerequisite: ARCH 115
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 150 or ENGT 170, or industry experience in CADD applications
Transfers to: CSU
This intermediate level course is for students pursuing a degree or certificate in Architectural Design and Drawing and is a requirement for both the A.S. degree and certificate. This course involves creating a set of construction drawings for a two story structure and emphasizes the study of wall and construction systems, foundation systems, detailing of wood and concrete systems, sections, interior details, and completion of the
residential construction documents. Emphasis is placed on development of technical skills in detailing, use of reference materials, building codes, standard construction techniques and architectural graphic standards. All construction documents will be developed using CADD.

**ARCH 215**
Architectural Perspective and Rendering
**Prerequisite:** ARCH 115
**Advisory:** ENGL 030 or ENLA 034 or appropriate placement; ENGT 104 or appropriate placement; ENGT 105
**Transfers to:** CSU
This course is for all students interested in developing skills in architectural perspective drawing and is a requirement for the Architecture A.S. degree. Students will be introduced to the theory of and practical application of perspective drawing and rendering as used in architecture. Topics include one, two, and three point perspectives, entourage, and introduction to rendering techniques, such as water color, markers, film, pastels, pencil, pen and ink. Presentation techniques will also be discussed.

**4 Units**
54 Lecture hours
54 Lab hours

**ARCH 225**
Commercial Wood and Masonry Design and Construction
**Prerequisite:** ARCH 115
**Advisory:** ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 150 or ENGT 170 or industry experience in CADD applications
**Transfers to:** CSU
This advanced level course is for students pursuing an A.S. Degree or Certificate in Architecture and Architectural Design and Drawing. The course includes the study of construction methods, building ordnances and codes. As a component of the course students will complete construction documents for concrete block, steel and wood commercial buildings and retail space. Emphasis is placed on effective space utilization, technical plans, elevations, aesthetics, handicap requirements, site utilization and development, traffic flow, landscape, foundation design and construction details.

**4 Units**
54 Lecture hours
54 Lab hours

**ARCH 235**
Architectural Design Studio
**Prerequisite:** ARCH 215
**Advisory:** ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 150
**Transfers to:** UC, CSU
This course is for students pursuing the A.S. degree in Architecture with the intent of transferring and continuing their study of architecture. Topics explored include multiple design principles, concept applications, spatial and form definition, preliminary studies, interior and exterior space planning, site orientation, styles and materials. Student design concepts will be expressed verbally and graphically using presentation drawings, isometrics and perspectives, conceptual models, renderings and photographs. Students will develop skills in a studio atmosphere dealing with existing conditions, problem solving using design criteria, codes and environmental relationships for abstract, residential and small commercial structures.

**4 Units**
54 Lecture hours
54 Lab hours

**ARCH 236**
Architecture Design Studio II
**Prerequisite:** ARCH 235
**Advisory:** ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
**Transfers to:** UC, CSU
This second level Design Studio course builds upon the foundation of architectural design studio ARCH 235. This course presents additional design approaches to spatial and form definition of architectural program, urban and site planning, topographic, civil and environmental issues. Architectural design proposals and projects will be expressed verbally and graphically using presentation drawings, conceptual models, renderings and photographs. Students will enhance their design skills in a studio atmosphere, working to justify their design solutions.

**4 Units**
54 Lecture hours
54 Lab hours

**ARCH 260**
Advanced Architecture Using Revit and 3D Software
**Prerequisite:** ARCH 115; ENGT 150
**Advisory:** ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 101 or two years of high school drafting; ENGT 200
**Transfers to:** CSU
This course is for all students pursuing an A.S. Degree in Architecture (Transfer) and Architectural Design and Drawing and presents an intensive study of BIM (Building Information Modeling) applications as they relate to architecture. Utilizing the latest releases of 3D design software such as Revit and AutoCAD Architecture and previously learned technical and architectural drafting conventions, students will produce two and three dimensional BIM generated architectural drawings and 3D virtual models. High technology skills which are necessary to function as a designer or CADD Drafter are emphasized.

**4 Units**
54 Lecture hours
54 Lab hours
ARCH 290
Cooperative Work Experience/Internship for Architecture Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of architecture and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

ARCH 299
Directed Study in Architecture Design
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Architecture Design & Drawing beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

ART 101
Introduction to Studio Arts
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This lecture/lab course provides an introduction to the Studio Arts for the non-art major providing an opportunity to learn about the arts through a series of lectures and hands-on projects within an art historical and conceptual framework. Project and topics include drawing, painting, printmaking, design, mixed media and sculpture.
3 Units
36 Lecture hours
72 Lab hours

ART 104 (C-ID ARTH 145)
Art of the Ancient Americas
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course provides a study of the indigenous arts of Mexico, Andean South America, and Central America, from civilizations including the Olmek, Maya, Aztec, Inca, Moche, Chavin de Huantar, and Nazca. Art of representative native tribes of the territory now encompassed by the United States and Canada will be comparatively examined. Works of art and architecture will be presented in relation to the various religious beliefs, political/economic systems, and cultural practices of the ancient Americas. Art historical and archaeo logical methodologies relating to the understanding and interpretation of non-Western art will be discussed. This course is appropriate for students pursuing a degree in art or art history, and/or students with an interest in American studies and Latin American studies.
3 Units
54 Lecture hours

ART 105 (C-ID ARTH 110)
Survey of Western Art: Prehistory through the Middle Ages
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: ART 105 or ART 105H)
This course presents a broad overview of Prehistoric, Mesopotamian, Egyptian, Greek, Etruscan, Roman, Early Christian, Islamic, and Medieval art and architecture. This course is appropriate for all students pursuing the degree in Studio Art or Art History or seeking to fulfill general education requirements in Fine Arts and Humanities.
3 Units
54 Lecture hours

ART 105H (C-ID ARTH 110)
Survey of Western Art: Prehistory through the Middle Ages Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: ART 105 or ART 105H)
This course presents a broad overview of Prehistoric, Mesopotamian, Egyptian, Greek, Etruscan, Roman, Early Christian, Islamic, and Medieval art and architecture. This course is appropriate for all students pursuing the degree in Studio Art and/or seeking to fulfill general education requirements in Fine Arts and Humanities. This course is designed for those who meet Honors Program requirements.
3 Units
54 Lecture hours

ART 106 (C-ID ARTH 120)
Survey of Western Art: Renaissance to Contemporary
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: ART 106 or ART 106H)
This course provides an overview of the history of Western art from the 14th century through the Modern Era, including Renaissance, Baroque, Rococo, Neoclassicism, Romanticism, Realism, Early Photography, Impressionism, Post Impressionism, Modernism, Postmodernism, and major art developments of the 20th and 21st centuries. This course is appropriate for all students pursuing the degree in Studio Art or Art History or seeking to fulfill general education requirements in Fine Arts and Humanities.
3 Units
54 Lecture hours

ART 106H (C-ID ARTH 120)
Survey of Western Art: Renaissance to Contemporary Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: ART 106 or ART 106H)
This course provides an overview of the history of Western art from the 14th century through the Modern Era, including Renaissance, Baroque, Rococo, Neoclassicism, Romanticism, Realism, Early Photography, Impressionism, Post Impressionism, Modernism, Postmodernism, and major art developments of the 20th and 21st centuries. This course is designed for those who meet Honors Program requirements, and is appropriate for all students pursuing the degree in Studio Art or Art History or seeking to fulfill general education requirements in Fine Arts and Humanities.

3 Units
54 Lecture hours

ART 107 (C-ID ARTH 130)
The Art of Asia
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course examines the artistic traditions of prehistoric to modern Asia in relation to their cultural, philosophical, and religious influences. The art and architecture of Central Asia (India, China, Korea, and Japan) will be emphasized. Examples from Southeast Asia, Pakistan, Tibet, and Nepal will also be discussed. This course is appropriate for all students interested in art and culture and for those seeking to fulfill general education requirements for Fine Arts and Humanities, as well as all Studio Art majors.

3 Units
54 Lecture hours

ART 108
The Art of Mexico
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course is a survey of the art and architecture of Mexico including PreColumbian, Viceregal (Colonial) and Modern 19th and 20th centuries. Chicano/a art will also be examined in relation to its Mexican antecedents. Art 108 is appropriate for all students interested in art and culture and for those seeking to fulfill general education requirements in Fine Arts and Humanities, as well as all studio art majors and art history majors.

3 Units
54 Lecture hours

ART 109
History of American Art
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course includes a study of American art and architecture from the colonial period to the early 20th century. The focus is on the art of the United States, with a close examination of the country’s artistic exchanges with Canada, Mexico, and South America. This course is appropriate for students with an interest in American studies, Latin American studies, those seeking to fulfill the general education requirements in Fine Arts and Humanities, the AA Degree in General Studies in Arts and Human Expression and/or the AA-T Degree in Art History.

3 Units
54 Lecture hours

ART 110 (C-ID ARTH 100)
Understanding Visual Art
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
ART 110 is a lecture course that provides the student with an introduction to the study of visual art: its vocabulary, its forms, the many roles it plays in society, and the variety of processes artists master in its making. Students gain insight into current approaches used in interpreting meaning from art and explore questions about the ways in which value is assigned to the art object. Using examples from cultures around the world and across time, this course offers a broad overview to any student interested in art and culture and to those seeking to fulfill general education requirements in Fine Arts and Humanities.

3 Units
54 Lecture hours

ART 112 (C-ID ARTH 150)
Visual Art in the Modern Era
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
ART 112 is a survey of developments in art and architecture from the early 19th century through the 20th century and into the 21st. From Neoclassicism and Romanticism through Postmodernism and contemporary art, visual art movements will be discussed in relation to stylistic trends, philosophical influences, innovations in technology, and other historical and social contexts. The roles played by artist, critic, and consumer in shaping these movements will be examined, as well as visual art’s impact upon society in the Modern Era. This course is appropriate for all students pursuing the degree in Art History and/or seeking to fulfill general education requirements in Fine Arts and Humanities.

3 Units
54 Lecture hours

ART 113
The History of Photography
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This lecture course examines the history of photography from its invention in the 1830s to the present. The technological development, social role, and aesthetic possibilities of photography will be discussed in relation to major historical, art historical, cultural, and political influences. This course is appropriate for all students interested in photography, art, and art history and culture and for those seeking to fulfill the general education requirement for Fine Arts and Humanities, as well as Studio Art majors and Art History majors.

3 Units
54 Lecture hours

ART 115
The Art of Film
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This introductory course explores film as an art form, its basic components, and its relation to the styles and movements of other visual arts forms. An understanding of cinematic language is emphasized by focusing upon film’s manipulation of time and space, its use of visual metaphors, montages, and explicit/implicit messages. The collaborative nature of filmmaking is studied by examining the role of cinematography, lighting, film editing, visual effects, art direction, and the use of sound and music to enhance the script and create style. Through discussion and written assignments, students develop the ability to analyze the impact of films viewed both in and out of class. This course is appropriate for any student interested in film, art, media studies, or culture.

3 Units
54 Lecture hours

ART 117
History of World Ceramics
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSI
This course provides the student with an introduction to world ceramic and pottery traditions: its vocabulary, its forms, the roles it plays in society, and the variety of processes employed by its makers. Using examples from cultures around the world and across time, this course offers a broad overview to any student interested in art and culture.

3 Units
54 Lecture hours
ART 120 (C-ID ARTS 100)
Two Dimensional Design
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a foundational, first semester course and is open to any student interested in the fundamentals of visual thinking as they apply to all visual media and fulfills a general education requirement in Art. This course provides an introduction to the concepts, applications, and art historical references related to two-dimensional art and composition, and includes the study of the basic elements of line, shape, texture, value, color and spatial illusion. Students will develop a visual vocabulary for creative expression through lecture presentations, studio projects, and written assignments.
3 Units
36 Lecture hours
72 Lab hours

ART 121 (C-ID ARTS 101)
Three Dimensional Design
Advisory: ART 120; READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This is a foundational, first semester art course and is open to all students interested in the fundamentals of visual thinking as they apply to all three dimensional media. It also fulfills a general education requirement in art. This course provides an introduction to the concepts, applications, and art historical references related to three-dimensional art, and includes the basic elements and principles of three-dimensional design. Students will develop a visual vocabulary for creative expression through lecture, slide and video presentations, and studio projects using a variety of tools and written assignments.
3 Units
36 Lecture hours
72 Lab hours

ART 124 (C-ID ARTS 270)
Color Theory
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is an introduction to the characteristics of color and its interaction suited for all art majors transferring to a four-year college or interested in working in the arts as a painter, illustrator or designer. The course will cover the principles, theories, and applications of additive and subtractive color in two dimensions. Topics will include major historical and contemporary color systems, production of projects in applied color, and the elements of design as they apply to color.
3 Units
36 Lecture hours
72 Lab hours

ART 126 Intermediate Painting
Prerequisite: ART 130; ART 135
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a second semester course for art and non-art majors interested in further development of painting skills and techniques, understanding the use of color and space, while strengthening observation and rendering skills. The course explores both traditional and contemporary painting concepts, styles, and techniques that involve complex compositional and technical problems in either acrylic or oil painting media.
3 Units
36 Lecture hours
72 Lab hours

ART 130 (C-ID ARTS 110)
Freehand Drawing I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a first semester course for art and non-art majors interested in developing basic drawing skills. As an introduction to observational drawing and composition, students will develop the ability to perceive and define shape, contour, volume, space, and light using a variety of drawing media and subject matter. Emphasis is on clarity of observation and the ability to order and translate 3-dimensional form and space into 2-dimensional drawings.
3 Units
36 Lecture hours
72 Lab hours

ART 131 (C-ID ARTS 205)
Freehand Drawing II
Prerequisite: ART 130
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a second semester course for art and non-art majors in observational drawing and composition, stressing an advanced ability to perceive and define shape, contour, volume, space, and light. Students will use a variety of drawing media and subject matter. Emphasis is on strengthening skills introduced in Freehand Drawing I, the exploration of color in drawing and concepts related to content.
3 Units
36 Lecture hours
72 Lab hours

ART 135 (C-ID ARTS 210)
Beginning Painting
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ART 130
Transfers to: UC, CSU
This is a first semester course for art and non-art majors interested in developing basic painting skills. The course explores both traditional and contemporary painting techniques while stressing an ability to perceive and define shape, contour, volume, texture, space, and light using acrylic or water-based oil painting media. Emphasis is on learning the techniques of painting, understanding the use of color, while strengthening observation and rendering skills, while providing an understanding of the historical and cultural development of painting in human expression and creativity. Students are advised to have some drawing skills before taking this class.
3 Units
36 Lecture hours
72 Lab hours

ART 136 Ceramics I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is an introductory course open to all art and non-art majors interested in learning basic skills in ceramics using the potter’s wheel. Students will develop a visual vocabulary for creative expression through lectures, power point, vocabulary lists and video presentations. This course covers beginning problems of centering, throwing and shaping various functional and non-functional pottery. Students will be introduced to the process of glazing and basic firing techniques. This course emphasizes exploring personal and cultural expression in the ceramic media. Evaluation will be based on using a variety of tools and writing assignments.
3 Units
36 Lecture hours
72 Lab hours

ART 140 Ceramics II
Prerequisite: ART 140
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is an intermediate course in ceramics open to all art and non-art majors, with continued emphasis on basic skills using the potter’s wheel. Included in the course will be inter-
mediate problems on the wheel, basic decorative techniques, and more advanced use of glaze. Students will be exploring contemporary artistic practice and the social and historical elements of ceramic art. The students will start learning about the kilns and how they are loaded and fired.

3 Units
36 Lecture hours
72 Lab hours

ART 142
Introduction to Ceramic Handbuilding
Advisory: ENGL 101 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a first semester course for art and non-art majors. It is designed to introduce students to the concepts, techniques, history, and contemporary practices of handbuilding in the ceramics arts. This course can be taken once and repeated three times for credit. This class is for any student who is interested in the fundamentals of clay construction using handbuilding technique.

3 Units
36 Lecture hours
72 Lab hours

ART 143
Ceramic Handbuilding II
Prerequisite: ART 142
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is an intermediate course in ceramics open to all art and non-art majors, with continued emphasis on basic skills in handbuilding. Included in the course will be an emphasis on exploring handbuilt forms in both vessels and ceramic sculpture. Students will solve visual and conceptual problems dealing with art and principles of design, i.e. line, shape, color, form, texture, and space.

3 Units
36 Lecture hours
72 Lab hours

ART 144
Ceramic Handbuilding III
Prerequisite: ART 141
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is an advanced course in ceramics open to all art and non-art majors, with continued emphasis on skills and ceramic art theory. ART 144 allows the student to explore complex problems of ceramic art. Students work with the ceramic medium in conjunction with other materials (wood, metal, glass). Students will explore clay surface design, as well as developing a ceramic handbuilt body of work.

3 Units
36 Lecture hours
72 Lab hours

ART 145
Glaze Composition
Prerequisite: ART 140 or ART 142
Advisory: MATH 062 or ability to conduct basic calculations using fractions, decimals, and percentages
Transfers to: CSU
This course provides an introduction to basic glaze and clay calculations. The students will learn to calculate glaze formulas and batch recipes. Students will analyze glazes and clay bodies. They will learn to formulate and alter glazes and clay bodies. The course involves mathematical computations as well as basic ceramic laboratory skills and safety precautions for handling chemicals. This course teaches students how to create unique glazes for their art work.

3 Units
27 Lecture hours
81 Lab hours

ART 146
Introduction to Sculpture
Prerequisite: ART 121
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ART 130
Transfers to: CSU
This course is suited for art majors transferring to a four-year college or any student interested in working in the arts. It provides an introduction to three-dimensional sculptural principles, techniques, and concepts utilizing a wide range of materials and practices. Various sculpture methods are practiced with attention to creative self-expression and historical context.

3 Units
36 Lecture hours
72 Lab hours

ART 150
Beginning Printmaking
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is an introduction to the art of printmaking suitable for studio art majors transferring to a four-year college or any student interested in working in the arts. This course is an introduction to the basic materials, equipment, and processes of printmaking, including relief (linocut and woodcut), intaglio (drypoint, etching and collagraph), planography (lithography and monotype), and stencil (screenprint).

3 Units
36 Lecture hours
72 Lab hours

ART 151
Intermediate Printmaking
Prerequisite: ART 150
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a second semester course for the art and non-art major in the continued study of intaglio and relief fine art printmaking processes. This course will expand upon techniques and skills students learned in Beginning Printmaking. ART 150 including color printing techniques as well as serigraph printing. While stressing creativity and expression students will also learn the practice of creating an edition.

3 Units
36 Lecture hours
72 Lab hours

ART 160
Rendering and Illustration
Advisory: READ 022 or appropriate placement; ART 130
Transfers to: UC, CSU
Intended for the student interested in developing skills in rendering and illustration, this course is a beginning course in illustration and rendering exploring both traditional and contemporary drawing techniques, stressing an ability to perceive and define shape, contour, volume, texture, space, and light both realistically as well as expressively using various media. Emphasis is on learning the techniques of illustration, understanding the use of color, while strengthening observation and rendering skills.

3 Units
36 Lecture hours
72 Lab hours

ART 161
Advanced Rendering and Illustration
Prerequisite: ART 160
Advisory: READ 022 or appropriate placement; ART 130
Transfers to: UC, CSU
Intended for the student interested in developing skills in rendering and illustration, this course is an advanced course in illustration and rendering exploring both traditional and contemporary drawing techniques while stressing an ability to perceive and define shape, contour, volume, texture, space, and light both realistically as well as expressively using various media. Emphasis is on learning the advanced techniques of illustration, understanding the use of color, while strengthening observation and rendering skills.

3 Units
36 Lecture hours
72 Lab hours
ART 170 (C-ID ARTS 250)
Introduction to Digital Painting
Prerequisite: ART 130
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students majoring in the Visual Arts: including Fine Arts, Illustration, Animation, Graphic Design and any student interested in learning to use the computer as a tool for original image making. The course will survey traditional drawing and painting techniques using computer technologies such as software, drawing tablets, scanners and printers. Students will investigate the fundamental pictorial elements of line, shape, space, color, and texture as well as the formal relationship of these elements to produce original works of art while learning the technology, concepts, and practices of digital art production.
3 Units
36 Lecture hours
72 Lab hours

ART 175
Computer Graphics
Advisory: READ 022 or appropriate placement
Transfers to: UC, CSU
This course is for the student interested in a degree in commercial art or any student interested in 2 dimensional paint and 3 dimensional modeling applications employed as tools by computer graphic artists. Topics covered will include the exploration of basic paint techniques as well as basic modeling, mapping, rendering and animation techniques as they relate to page and web design.
3 Units
36 Lecture hours
72 Lab hours

ART 185
Art Studio
Transfers to: UC, CSU
This course is designed to provide supervised studio study on an individual basis with various projects. Arranged: 4 hours lab. Offered on a pass-no pass basis.
1 Unit
72 Lab hours

ART 190
Gallery and Exhibition Design
Advisory: ENGL 035 or ENLA 100 or appropriate placement; ART 043 or appropriate placement
Transfers to: CSU
This course is a combination of studio and lecture that provides students with creative experience in exhibition design and display. It is appropriate for all students interested in art, art exhibitions, museum studies, and cultural studies. The topics addressed include exhibition space planning, principles of color and design, art exhibition principles, and proper care and handling of art objects. Students are also given an introduction to the basic principles of art curating and display.
3 Units
36 Lecture hours
72 Lab hours

ART 230 (C-ID ARTS 200)
Beginning Life Drawing
Prerequisite: ART 130
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a first semester course for art, animation, and non-art majors interested in developing the basic drawing skills of representing the human figure. As an introduction to observational figure drawing and composition, students will develop the ability to perceive and define the anatomy and structural organization of the human form in terms of expression design and creative use of drawing media.
3 Units
36 Lecture hours
72 Lab hours

ART 235
Advanced Painting I
Prerequisite: ART 136
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a third semester course in painting for the art and non-art major. The course constitutes a study of advanced painting problems stressing experimentation with traditional and contemporary methods of painting, composition, and expression. Class and individual projects using figure, still life, landscape, abstraction, shaped format, altered scale and material exploitation will be stressed.
3 Units
36 Lecture hours
72 Lab hours
ART 236
Advanced Painting II
Prerequisite: ART 235
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a fourth semester course in painting for the art and non-art major. This course explores experimentation with traditional and contemporary methods of painting using the figure, still life, landscape, abstraction and non-objective imagery with an emphasis on continuing skill development and problem solving of interpretation, expression and conceptual issues in painting.
3 Units
36 Lecture hours
72 Lab hours

ART 242
Advanced Ceramics
Prerequisite: ART 141
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is an advanced course in ceramics, open to all art and non-art majors. This class places a special emphasis on personal growth and aesthetics as well as increased proficiency on the potter's wheel. Students will investigate the concepts of management and expressive exploration of the unique characteristics of fired ceramics – both the opportunities and constraints presented in the processing of clay from a soft, plastic, fragile, impermanent substance into a hard, rigid, and completely metamorphosed material after drying and firing. It is a process that requires sensitivity to time and sequence, and demands critical informed technical management. An important aspect of the class will be having students evaluate their selection of type of clay, decorative techniques and final firing process to achieve their desired finished results. Included in this course will be advanced problem solving in forms, shapes, decorative techniques and glazing.
3 Units
36 Lecture hours
72 Lab hours

ART 252
Advanced Printmaking
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a third semester course for the art and non-art major in the continued study of intaglio and relief fine art printmaking processes. This course will expand upon techniques and skills students learned in Intermediate Printmaking, ART 151. Students will improve printing skills enhanced by supervised repetition and practice within class periods and learn to create an edition of original prints.
3 Units
36 Lecture hours
72 Lab hours

ART 260
Figure Drawing for Animators
Prerequisite: ART 230
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This figure drawing course for animators and art students focuses on gesture and how to capture the essential movement, dynamic expression, and individual attitude of the model. It provides an introduction to figure drawing for animation and is designed to promote deeper understanding of life drawing that will serve as a foundation for further studies in animation and entertainment arts. Students will refine basic skills in drawing human anatomy while learning to draw the figure in sequential movement, understand weight and balance, facial and body expression, and figure invention. This course may be taken by art majors wishing to further life drawing skills and is recommended for all animation art majors.
3 Units
36 Lecture hours
72 Lab hours

ART 290
Cooperative Work Experience/Internship for Visual Arts Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business, industrial, studio, non-profit and professional art organizations under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of visual arts and have completed or enrolled in the appropriate coursework. Instructor approval is required to remain in the class. “Contact the CWE office regarding re-enrollment procedures.”
1 to 4 Units
1 Unit/225 hours; 2 Units/300 hours.

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours;
3 Units/180 hours; 4 Units/240 hours

Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours;
3 Units/225 hours; 4 Units/300 hours.

ART 299A
Directed Study in Art History
Advisory: ART 104 or 105 or 105H or 106 or 106H or 107 or 108 or 109 or 112 or 113 or 115
Transfers to: CSU
The course provides an opportunity for students to expand their studies in Art History beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

ART 299C
Directed Study in Ceramics
Prerequisite: ART 141
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
The course provides an opportunity for students to expand their studies in ceramics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

ART 299D
Directed Study in Drawing
Prerequisite: ART 232 or ART 233
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
The course provides an opportunity for the student to expand their studies in drawing beyond the classroom...
by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.  
1 to 3 Units  
54 to 162 Lab hours

ART 299F  
Directed Study in Painting  
Prerequisite: ART 236  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement  
Transfers to: CSU  
The course provides an opportunity for the student to expand their studies in painting beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.  
1 to 3 Units  
54 to 162 Lab hours

ART 299G  
Directed Study in Artistic Anatomy  
Prerequisite: ART 232  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement  
Transfers to: CSU  
The course provides an opportunity for the art student to expand their studies in anatomical form beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.  
1 to 3 Units  
54 to 162 Lab hours

ART 299PP  
Directed Study in Portfolio Preparation  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; Any one of the following: ART 131, 136, 141, 142, 165, 231, or PHTO 191  
Transfers to: CSU  
The course provides an opportunity for Visual Arts students to prepare and develop a professional portfolio. The portfolio project will be arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.  
1 to 3 Units  
54 to 162 Lab hours

ART 299S  
Directed Study in Sculpture  
Prerequisite: ART 121 or ART 142 or ART 146  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement  
Transfers to: CSU  
The course provides an opportunity for the student to expand their studies in sculpture and three-dimensional form beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.  
1 to 3 Units  
54 to 162 Lab hours

ASSOCIATE DEGREE NURSING  
Division of Health Science & Nursing  
ADN 075  
LVN Transition into the Associate Degree Nursing Program  
Prerequisite: Acceptance into Nursing Program and Current LVN License  
Advisory: READ 043 or appropriate placement; MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement  
This short-term course provides an overview of the Associate Degree Nursing Program. The focus is on successful learning strategies and the development of critical thinking skills. An overview of the systems developmental stress model is included as a framework for the nursing process and the Associate Degree Nursing Curriculum. Also included is an in-depth study of the nursing process including physical assessment, nursing diagnosis, interventions and evaluations. The nursing skills required for physical assessment and basic patient care will be presented. This course is open to all career ladder LVN and 30 Units option students entering the second year of the Associate Degree Nursing Program.  
2.5 Units  
36 Lecture hours  
27 Lab hours

ADN 150  
Medical/Surgical Nursing I  
Prerequisite: ADN 151, ADN 151L, BIOL 222, and ENGL 101  
Corequisite: ADN 150L and ADN 154  
Advisory: READ 043 or appropriate placement  
Transfers to: CSU  
This course focuses on the application of the nursing process for patients with disturbances in the digestive and renal systems, fluid and electrolyte status and acid/base balance, endocrine, cardiovascular and respi-
ADN 150L
Medical/Surgical Nursing I Lab
Prerequisite: ADN 151, ADN 151L, BIOL 222, and ENGL 101
Corequisite: ADN 150 and ADN 154
Transfers to: CSU
This course focuses on the application of the nursing process in caring for patients with disturbances in the digestive and renal systems, fluid and electrolyte status and acid/base balance, endocrine, cardiovascular and respiratory systems. The pathophysiology of disease processes, as well as medical and nursing interventions, is discussed. The students will apply the theoretical concepts in the clinical setting. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 150 and ADN 150L, and pass both courses together. They cannot be taken individually for credit.
4 Units
216 Lab hours

ADN 151
Clinical Nursing Concepts
Prerequisite: BIOL 125, BIOL 222, BIOL 226 and ENGL 101
Corequisite: ADN 151L
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This is an introductory course in basic clinical nursing concepts. The student will be introduced to a theoretical framework for nursing practice including the nursing process, the conceptual model used in the Associate Degree Nursing program and QSEN. Concepts related to therapeutic communication, legal and ethical issues, documentation and safety are included. In addition, concepts related to assessment, nursing interventions and individualization of patient care will be presented. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 151 and ADN 151L, and pass both courses together. They cannot be taken individually for credit.
2 Units
36 Lecture hours

ADN 151L
Clinical Nursing Concepts Lab
Prerequisite: BIOL 125, BIOL 222, BIOL 226 and ENGL 101
Corequisite: ADN 151
Advisory: READ 043 or appropriate placement; MATH 070 or MATH 070D or MATH 073 or appropriate placement
Transfers to: CSU
This is an introductory laboratory and clinical course designed to familiarize the student with the nursing process and its application to patient care. Principles and techniques for nursing skills will be introduced in order to provide the student with the opportunity to demonstrate mastery of those skills and subsequently the ability to function safely and appropriately in the laboratory and clinical setting. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 151 and ADN 151L, and pass both courses together. They cannot be taken individually for credit.
2 Units
108 Lab hours

ADN 154
Pharmacology
Prerequisite: ADN 151
Corequisite: ADN 150 and ADN 150L
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This is an introduction pharmacology course that focuses on the study of drugs most frequently prescribed. The course emphasis is on basic techniques and computations used in the administration of medications as well as the special nursing considerations that pertain to the safe administration of medication. Completion of this course allows the Associate Degree Nursing student to safely administer medication to patients under the supervision of the nursing instructor.
2 Units
27 Lecture hours
27 Lab hours

ADN 155
Nursing Process: Childbearing Family/ Women’s Health
Prerequisite: ADN 150, ADN 150L, ADN 151, ADN 151L, and ADN 154
Corequisite: ADN 155L
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course focuses on the application of the nursing process in caring for childbearing women, their newborns, and their families through the normal childbearing process with attention to common pathophysiology’s associated with childbearing and the newborn. Students will use evidence-based practice to guide their clinical practice and enhance their cultural sensitivity to the diverse population served. Development of patient teaching skills is emphasized. The nursing process is integrated throughout the clinical experience. The students will be able to apply the theoretical concepts learned in theory in the clinical setting. This course is designed for students in the Associate degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 155 and ADN 155L, and pass both courses together. They cannot be taken individually for credit.
2 Units
108 Lab hours

ADN 156
Nursing Process Applied to the Care of Children
Prerequisite: ADN 150, ADN 150L, and ADN 154
Corequisite: ADN 156L
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course focuses on the application of the nursing process in caring for children. Emphasis is placed on normal growth and development patterns of the growing child and developmental, biological, interpersonal and intrapersonal stressors affecting children and their families. The pathophysiology of disease process that may occur during childhood and related medical and nursing interventions are discussed. This course is designed for students in the Associate Degree Nursing Program. The
Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 156 and ADN 156L, and pass both courses together. They cannot be taken individually for credit.

2 Units
36 Lecture hours

ADN 156L
Nursing Process Applied to the Care of Children Lab
Prerequisite: ADN 150, ADN 150L, and ADN 154
Corequisite: ADN 156
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course focuses on the application of the nursing process in caring for children. Emphasis is placed on normal growth and development patterns of the growing child and developmental, biological, interpersonal and intrapersonal stressors affecting children and their families. The pathophysiology of disease process that may occur during childhood and related medical and nursing interventions are discussed. The students will apply the theoretical concepts in the clinical setting. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 156 and ADN 156L, and pass both courses together. They cannot be taken individually for credit.

2 Units
108 Lab hours

ADN 250
Advanced Pharmacology
Prerequisite: ADN 155 and ADN 156 (for generic ADN students); ADN 075 (for LVN to ADN students)
Advisory: ENGL 101; READ 043 or appropriate placement; MATH 070 or MATH 070D or MATH 073 or appropriate placement
Transfers to: CSU
This is an advanced pharmacology course that focuses on the skills and study of medications used for neurological, psychiatric, and medical-surgical concepts. The course emphasis is on advanced techniques and computations used in the administration of medications utilizing the nursing process and the Systems Developmental Stress Model, as well as the special nursing considerations that pertain to the safe administration of medication. Study of this course allows the Associate Degree Nursing student to continue to safely administer medications to patients.

1 Unit
18 Lecture hours

ADN 251
Medical/Surgical Nursing II
Prerequisite: ADN 155, ADN 155L and ADN 156, ADN 156L (for generic ADN students); ADN 075 (for LVN to ADN students)
Corequisite: ADN 252 and ADN 252L (students who have an active Psychiatric Technician license are exempt from the ADN 252 and ADN 252L corequisites); ADN 250 and ADN 251L
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course focuses on the aging process as it relates to normal aging, changing biological, interpersonal and intrapersonal needs. It also focuses on the application of the nursing process in caring for patients with disturbances in perception, coordination and mobility. The pathophysiology of disease processes, as well as medical and nursing interventions and rehabilitative approaches to restoring and maintaining optimum health are discussed. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 251 and ADN 251L, and pass both courses together. They cannot be taken individually for credit.

2 Units
36 Lecture hours

ADN 251L
Medical/Surgical Nursing II Lab
Prerequisite: ADN 155, ADN 155L and ADN 156, ADN 156L (for generic ADN students); ADN 075 (for LVN to ADN students)
Corequisite: ADN 252 and ADN 252L (students who have an active Psychiatric Technician license are exempt from ADN 252 and ADN 252L corequisites); ADN 250 and ADN 251L
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course focuses on application of the nursing process as a problem solving approach to assessment, problem identification and intervention for patients with psychiatric and mental health problems. Basic concepts related to biological, interpersonal and intrapersonal factors in mental health and mental illness are discussed. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 252 and ADN 252L, and pass both courses together. They cannot be taken individually for credit.

2.5 Units
136 Lab hours

ADN 252
Psychiatric/Mental Health Nursing
Prerequisite: ADN 155, ADN 155L and ADN 156, ADN 156L; OR ADN 075 and active California Vocational Nursing License
Corequisite: ADN 252
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course focuses on application of the nursing process as a problem solving approach to assessment, problem identification and intervention for patients with psychiatric and mental health problems. Basic concepts related to biological, interpersonal and intrapersonal factors in mental health and mental illness are discussed. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 252 and ADN 252L, and pass both courses together. They cannot be taken individually for credit.

2 Units
36 Lecture hours

ADN 252L
Psychiatric/Mental Health Nursing Lab
Prerequisite: ADN 155, ADN 155L and ADN 156, ADN 156L; OR ADN 075 and active California Vocational Nursing License
Corequisite: ADN 252L
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course focuses on application of the nursing process as a problem solving approach to assessment, problem identification and intervention for patients with psychiatric and mental health problems. Basic concepts related to biological, interpersonal and intrapersonal factors in mental health and mental illness are discussed. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 252 and ADN 252L, and pass both courses together. They cannot be taken individually for credit.

1.5 Units
81 Lab hours

ADN 253
Medical/Surgical Nursing III
Prerequisite: ADN 250, ADN 251, ADN 251L, ADN 252, and ADN 252L
Corequisite: ADN 253L
Transfers to: CSU
This course focuses on the nursing process with patients requiring complex nursing care. The course emphasizes approaches to handling generalized emergencies, immunologic problems, and oncologic problems. The course integrates all past nursing theory to assist the nursing student with advanced nursing concepts. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 253 and ADN 253L, and pass both courses together. They cannot be taken individually for credit.

2 Units
36 Lecture hours

ADN 253L Medical/Surgical Nursing III Lab
Prerequisite: ADN 250, ADN 251, ADN 251L, ADN 252, and ADN 252L
Corequisite: ADN 253
Transfers to: CSU
This course focuses on the nursing process with patients requiring complex nursing care. The course emphasizes generalized emergencies, immunologic problems and oncologic problems. The course integrates all past nursing theory to assist the nursing student with advanced nursing concepts. The students will apply the theoretical concepts in the clinical setting. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 253 and ADN 253L, and pass both courses together. They cannot be taken individually for credit. This course is offered on a pass/no pass basis.

3 Units
162 Lab hours

ADN 254 Leadership and Management in Nursing
Prerequisite: ADN 253 and ADN 253L
Corequisite: ADN 254L
Transfers to: CSU
This course focuses on principles of leadership and management as well as current trends in nursing practice. The legal and ethical responsibilities of the professional nurse will be discussed as well as the specific skills and attributes needed as students’ transition to nursing practice as a member of a team. Methods to maintain professional competence and advancement in the profession will be explored. This course is designed for students in the Associate Degree Nursing Program. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 254 and ADN 254L, and pass both courses together. They cannot be taken individually for credit.

1.5 Units
27 Lecture hours

ADN 254L Leadership and Management in Nursing Lab
Prerequisite: ADN 253 and ADN 253L
Corequisite: ADN 254
Transfers to: CSU
This course focuses on the application of theories and principles of leadership and management. Students will apply theory content while working in a clinical preceptorship, providing care under the guidance of an RN preceptor. The Board of Registered Nursing requires that students must be concurrently enrolled in both ADN 254 and ADN 254L, and pass both courses together. They cannot be taken individually for credit.

2.5 Units
135 Lab hours

ADN 290 Cooperative Work Experience/RN Transition
Prerequisite: California Registered Nurse License; Recent graduate of an RN program within the last 12 months
Transfers to: CSU
This course is designed for students who have already obtained their Registered Nurse license but have not been able to obtain employment. This course is a collaboration between Rio Hondo College and local Medical Centers that will provide a structured clinical practice environment and learning opportunities that support a deeper understanding of the healthcare environment in which Registered Nurses work. The course will be structured with 5 hours of theory at Rio Hondo College and 235 hours of clinical/simulation coursework. The theory coursework will review professionalism, interview skills and knowledge, skills and attitudes necessary to improve the quality and safety of the healthcare system. The clinical and simulation experience will provide the new graduate the opportunity to increase competence with clinical skills, critical thinking and professional role assimilation. Unlike other CWE courses, this course may only be taken once for 4 units of credit.

4 Units
5 Lecture hours
235 Other hours

ASTRONOMY
Division of Mathematics, Sciences, and Engineering

ASTR 110 General Astronomy
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC (credit limit*), CSU
("Students will receive credit from UC for only one of the following courses: ASTR 110 or ASTR 110H"
This course is designed to develop an appreciation of astronomy and a broad cosmic perspective. The emphasis of the course is on the current state of knowledge of our solar system, our galaxy, and the universe. Topics on the frontier of astronomical knowledge such as black holes and the search for extraterrestrial life will be explored. This course is designed for those with an interest in astronomy or anyone who desires to expand their cosmic horizons.

3 Units
54 Lecture hours

ASTR 110H General Astronomy Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC (credit limit*), CSU
("Students will receive credit for only one of the following courses: ASTR 110 or ASTR 110H"
This course is designed to develop an appreciation of astronomy and a broad cosmic perspective. The emphasis of the course is on the current state of knowledge of our solar system, our galaxy, and the universe. Topics on the frontier of astronomical knowledge such as black holes and the search for extraterrestrial life will be explored. This course is designed for those with an interest in astronomy or anyone who desires to expand their cosmic horizons.

3 Units
54 Lecture hours

ASTR 112 Observational Astronomy
Prerequisite/Corequisite: ASTR 110
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC (credit limit*), CSU
("Students will receive credit for only one of the following courses: ASTR 112 or ASTR 114"
This course is designed to develop an appreciation of astronomy and a broad cosmic perspective. The emphasis of the course is on the current state of knowledge of our solar system, our galaxy, and the universe. Topics on the frontier of astronomical knowledge such as black holes and the search for extraterrestrial life will be explored. This course is designed for those with an interest in astronomy or anyone who desires to expand their cosmic horizons.

3 Units
54 Lecture hours

2019-2020 Catalog
Rio Hondo College / 303
This course is designed to acquaint the student with the methods, techniques, and tools of the astronomer. Indoor labs will demonstrate classical methods and techniques of science. Students will learn the critical thinking processes needed to acquire and analyze scientific data. Students will become familiar with visible objects including constellations, planets, star clusters, galaxies, meteor, and the phases of the moon. Students will learn to locate objects visually and use astronomical coordinate systems. The development of skill in the operation of optical telescopes is emphasized. This course is designed for those with an interest in learning night skies and the tools astronomers use to explore the cosmos. Observatory facilities will be utilized often, weather permitting.

1 Unit
54 Lab hours

ASTR 299
Directed Study: Astronomy

Transfers to: CSU

Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report on the student's independent progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units
54 to 162 Lab hours

AUTOMOTIVE TECHNOLOGY
Division of Career & Technical Education

AUTO 045
Honda/Acura Express Service

Prerequisite: AUTO 101 or AUTO 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course introduces maintenance light repair and service operations for late model Honda/Acura vehicles. Students will engage in MLRS interactive activities, lessons and/or special assignments via distant learning using Honda’s Interactive Training and Support Network. Upon completion of each MLRS training module students will be assessed on the subject matter. Successful completion of all MLRS modules will then be accompanied by an Express Service performance evaluation. During Express Service students will have an opportunity to demonstrate their skills in MLRS areas in a mock dealership environment. Successful completion of all MLRS modules and the Express Service evaluation will count toward the students MLRS certification/certificate.

4 Units
72 Lecture hours

AUTO 046
Honda/Acura Automatic Transmission Systems

Corequisite: AUTO 125
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course provides instruction relating to specific automatic transmission internal operation: drive, driven, and holding components, along with fluid pressures and sensor voltages. Students will engage in activities using special Honda diagnostic equipment to research automatic transmission topics from the Honda Interactive Training Network (HINT). Students will also participate in instructor lead demonstrations and interactive classroom assignments. Course completion shall include finishing all required HINT course training modules and proof of module posting on American Honda’s Dealer Personal Tracking System (DPTS). The course is a requirement for the Honda/Acura Professional Career Training Program (PACT Program) Powertrain and Transmission Systems Certificate of Achievement and is in partial fulfillment of the Honda PACT AS degree.

4 Units
72 Lecture hours

AUTO 0451
Honda/Acura Chassis Electrical Systems

Prerequisite: AUTO 105 or AUTO 140
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

AUTO 0451 is a course in automotive chassis electronics. The content reflects operation of digital circuits, semi-conductor devices, and methods for troubleshooting complex problems. Students will engage in a variety of activities using diagnostic equipment, the five-step diagnostic method, and research to discover vehicle failures. Students will also be expected to obtain research materials from Honda’s interactive active Technical Library to support their diagnosis. The course intention is to build upon the student’s prior knowledge of electronics using basic parallel/series circuit design fundamentals as the foundation. Students will learn how to make circuit performance predictions from schematics; along with test data, they will be able to navigate a circuit’s operation via diagnostic flow charts. Successful course completion shall include the following: finish designated Honda Interactive Network Training (HINT) modules with proof of module posting on the students Dealer Personal Tracking System (DPTS), correctly diagnose vehicle failures, completion of homework assignments and perform satisfactorily on practical exams. AUTO 0451 is a requirement for the Honda/Acura Professional Training
Procedures
Smog Technician Diagnostic and Repair

AUT0 102
Introduction to Honda/Acura Service and Repair
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This is an introductory course designed to provide the student with the fundamentals of operation of the various systems of Honda and Acura vehicles. Students will learn basic automotive tool and equipment use and how to safely perform many basic repair and maintenance operations. Students will learn using Honda and Acura vehicles, and school provided units and automotive component parts. All completed work will be reported on American Honda’s Dealer Personal Tracking System (DPTS). This course is part of American Honda’s Professional Automotive Career Training (PACT) program.
3 Units
45 Lecture hours
27 Lab hours

AUT0 103
Introduction to Automotive Service and Repair: Undercar Service
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is an introductory course designed to provide the student with the fundamentals of the transmission, brakes, suspension, heating and air conditioning, engine performance, and emission control systems of the modern automobile. Students will learn basic automotive tool and equipment use and how to safely perform basic repair and maintenance operations. Students will have the opportunity to perform minor repair work on their own vehicles to complete required tasks. This course is designed to be a companion course to AUTO 101 and AUTO 106, and is one of the three prerequisite courses for AUTO 107. Students are encouraged to complete all three courses in order to obtain a firm foundation in this subject, and it is required for the General Service Technician Certificate Program.
3 Units
45 Lecture hours
27 Lab hours

AUT0 106
Automotive Electrical Tools and Diagnostic Procedures
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is an introductory course designed to provide the student with the fundamentals of the electrical systems of the modern automobile. Emphasis will be placed on electrical fundamentals, symbols and circuit diagrams, batteries, starting, charging, ignition, and lighting systems. Students will learn the proper use of automotive electrical tools and equipment, and how to safely perform basic vehicle electrical repair and maintenance operations. Students will have the opportunity to perform minor repair work on their own vehicles to complete required tasks. This course is designed to be a companion course to AUTO 101 and AUTO 103, and is one of the three prerequisite courses for AUTO 107. Students are encouraged to complete all three courses in order to obtain a firm foundation in this subject, and it is required for the General Service Technician Certificate Program.
3 Units
45 Lecture hours
27 Lab hours
systems, and controls. This course is for the beginning student, general technicians and emission control (smog) technicians interested in automotive diesel technology.

3 Units
54 Lecture hours

AUTO 110
Introduction to Engine Diagnosis and Tune-Up

Prerequisite: AUTO 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is an introductory study of automotive diagnosis and tune-up procedures as they pertain to the function and control of the engine, fuel, ignition, starting, and charging systems. This course is first in a series of Engine Diagnosis and Tune-Up classes, and is designed for the student who wants to enter the field of Tune-Up, Driveability, and Emissions.

3 Units
45 Lecture hours
27 Lab hours

AUTO 115
Computerized Engine Controls and Diagnostics

Prerequisite: AUTO 106
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to provide the student with an introduction to the ASE L1 Advanced Engine Performance “Composite Vehicle” by the use of simulator boards and computer-based training methods. This is an introductory study of computerized engine controls and diagnosis as it pertains to the function and control of the engine, fuel, ignition, and emission control systems. Emphasis will be placed upon system components and their operational characteristics. Basic troubleshooting techniques of the engine, fuel, ignition, and emission control systems will be demonstrated.

3 Units
54 Lecture hours

AUTO 118
Light Duty Vehicle Diesel Fuel Systems & Emission Control Diagnostics

Prerequisite: AUTO 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 108
Transfers to: CSU
This course is designed to strengthen existing student skills in the field of diagnosing Light Duty Vehicle diesel fuel systems and related driveability and emission control concerns. This course is also for emission control (smog) technicians desiring to take and pass the ASE A9 Light Vehicle Diesel Engines certification exam covering advanced auto/truck diesel technology. Course content includes advanced study emphasizing the latest theories and principles and troubleshooting procedures of late-model vehicle diesel fuel systems. Emphasis will be placed on advanced diesel engine diagnosis and repair, and diesel engine air, fuel, and emission system diagnosis and repair. The use of a variety of modern diagnostic tools and equipment is included. Students, with permission from the Division, may re-enroll only one time for certification or licensure standards.

3 Units
45 Lecture hours
27 Lab hours

AUTO 120
Engine Tune-Up/Performance

Prerequisite: AUTO 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 110; AUTO 115
Transfers to: CSU
This course is designed to strengthen the student knowledge of modern automotive fuel and ignition systems and the functional knowledge of system components. The class is structured to provide ‘hands-on’ diagnostic experience in system failure analysis, troubleshooting of components utilizing modern service repair techniques. Emphasis is placed on electronic diagnosis using Scan-Tools, DVOM, Digital Volt Ohm Meters, Lab Scopes, Exhaust Analyzers, information retrieval systems and diagnostic flow charts.

4 Units
54 Lecture hours
54 Lab hours

AUTO 128
Fuel Injection Systems I

Prerequisite: AUTO 106
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 110
Transfers to: CSU
This course is designed to provide the student with the fundamentals of pre-OBD-II Engine Management Systems related to fuel injected vehicles. Students will learn how to use specific tools and equipment, and how to safely perform basic repair and maintenance operations. Emphasis will be placed upon the history and evolution of fuel injection and engine management systems used on vehicles from the late 1960’s to 1995. Service Information Systems, Electrical Circuits, Symbols & Circuit Diagrams, and other related topics will be discussed. This course requires the student to have a solid background regarding the technical knowledge of basic Gasoline Engine Fuel and Ignition Systems as a prerequisite, and is required for the Automotive Electrical, Fuel & Safety Systems Certificate Program.

3 Units
54 Lecture hours

AUTO 130
Level-I Smog Technician Training Course: Engine and Emission Control Fundamentals

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 065
Transfers to: CSU
This course is designed to provide the student with the ability to satisfy the Bureau of Automotive Repair (BAR) Smog Check Technician training requirement of successfully completing the Level-I Smog Technician Training Course when applying for the California Smog Check Technician licensing examination. Course content includes Engine Theory, Design and Operation, Ignition Systems, Fuel Systems, Engine Management Systems, and Emission Control Systems. Emphasis is placed on proper engine diagnostic procedures and On-Board Diagnostic Systems (OBD-I and OBD-II). Lab activities focus on the use of testing equipment,
scan tools, digital scopes and meters, as well as inspection and repair procedures of vehicles that fail the Smog Test. Upon successful completion of this course, the student will receive a certificate of completion from the Rio Hondo Automotive Technology Department. Students with permission from the Division may re-enroll only one time for certification or licensure standards.

3 Units
45 Lecture hours
27 Lab hours

AUTO 135
Level-II Smog Technician Training Course: Smog Check Inspection Procedures
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 130

This course is designed to provide the student with the ability to satisfy the Bureau of Automotive Repair (BAR) Smog Check Technician training requirement of successfully completing the Level-II Smog Technician Training Course when applying for the California Smog Check Technician licensing examination. Course content includes Customer Awareness, Program Administration, Equipment Maintenance, Inspection and Testing Procedures, and Pass/Fail Reports. Emphasis is placed on the practical application of the loaded and non-loaded modes of emissions testing. Lab activities focus on vehicle identification, visual and functional inspections, calibration of testing equipment, as well as performing complete smog checks inspections of vehicles. Upon successful completion of this course, the student will receive a certificate of completion from the Rio Hondo Automotive Technology Department. Students with permission from the Division may re-enroll only one time for certification or licensure standards.

3 Units
45 Lecture hours
27 Lab hours

AUTO 138
Fuel Injection Systems II
Prerequisite: AUTO 106
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 110

This course is designed to provide the student with the fundamentals of post-OBD-II Engine Management Systems related to fuel injected vehicles. Students will learn how to use specific tools and equipment, and how to safely perform basic repair and maintenance operations. Emphasis will be placed upon the history and evolution of fuel injection and engine management systems used on vehicles from 1996 to the present. Service Information Systems, Electrical Circuits, Symbols & Circuit Diagrams, and other related topics will be discussed. This course requires the student to have a solid background regarding the technical knowledge of basic Gasoline Engine Fuel and Ignition Systems as a prerequisite, and is required for the Automotive Electrical, Fuel & Safety Systems Certificate Program.

3 Units
54 Lecture hours

AUTO 140
Body and Chassis Electrical Systems
Prerequisite: AUTO 102 or AUTO 106
Advisory: READ 043 or appropriate placement; AUTO 157

This course provides an overview of the modern automobile's electrical system as related to the body and chassis of the vehicle. The theory of operation, operational characteristics and methods of problem diagnostics and repair for the following systems are included: lighting, instruments, windshield wipers, power windows/seats/mirrors, audio systems, convertible tops, safety restraints, (SRS) Supplemental Restraint Systems, and anti-theft systems. This course prepares the student for the (ASE) Automotive service Excellence A-6 exam and is intended for Automotive majors. Students with permission from the Division may re-enroll only one time for certification or licensure standards.

4 Units
54 Lecture hours
54 Lab hours

AUTO 141
Alternative Fuels I
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement

This course is designed for the experienced technician working in the field of stationary power engines, transportation and clean energy fuels seeking to improve skills related to the installation and repair of gaseous fuels.

4 Units
54 Lecture hours

AUTO 142
Alternative Fuels II
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement

This is the second course on alternative fuel systems used to power modern vehicles. Emphasis will be placed on installation, diagnostic procedures, laptop computers, and computer monitoring of Compressed Natural gas (CNG), and Liquid Natural Gas (LNG) systems. The application of other alternative fuels such as Hydrogen, LPG, Bio Fuels, etc will also be covered. Students will also develop skills that interface with modern technology computer based automotive electronic and network controls. SAE and CAN network control systems will also be covered. This course is designed for the experienced technician working in the field of stationary power engines, transportation and clean energy fuels seeking to improve skills related to the installation and repair of gaseous fuels.

4 Units
54 Lecture hours

AUTO 147 (C-ID ALTF 100X)
Introduction to Hybrid and Electric Vehicle Technology
Prerequisite: AUTO 157
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement

This course explores the use of Hybrid and Electric power for vehicle transportation. Topics will include: safety when using high voltage, maintenance, drivability, inverter power transfer, battery technologies, hydrogen electric power, and fuel cell technology. Physics of battery storage, Hybrid generation systems, Electric vehicle applications and their integrated systems from many manufactures will be discussed. This course is suitable for student’s entering into alternative fuels or power generation and energy technology field. This course is a required course for the Alternative Fuels Certificate and Degree.

3 Units
45 Lecture hours
27 Lab hours
AUTO 148
Vehicle Safety, Comfort and Convenience Systems
Prerequisite: AUTO 106
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfer to: CSU
This course is designed to provide the student with the fundamentals of Automotive Safety, Comfort and Convenience Systems related to the modern automobile. Students will learn how to use specific tools and equipment, and how to safely perform basic repair and maintenance operations. Emphasis will be placed upon the SRS Airbag Restraint Systems, ABS and Traction Control Systems, AC and Heating Systems, Lighting Systems, and Theft-deterrent Systems. Service Information Systems, Electrical Circuits, Symbols & Circuit Diagrams, and other related topics will be discussed. This course requires the student to have a solid background regarding the technical knowledge of basic Automotive Electrical and Electronic Systems as a suggested prerequisite, and is required for the Automotive Electrical, Fuel & Safety Systems Certificate Program.
3 Units
54 Lecture hours

AUTO 150
Engine Electrical Systems
Prerequisite: AUTO 102 or AUTO 106
Advisory: AUTO 115
Transfer to: CSU
This course discusses the modern automobile’s electrical system as related to the engine and various engine related systems. The theory of operation, operational characteristics and methods of problem diagnosis and repair for the following systems are included; electronic ignition systems, electronic fuel injection, engine management, emission control, charging, cooling and starting. This course prepares the student for the (ASE) Automotive Service Excellence; A-8 Engine Performance Exam and is intended for Automotive majors. Students with permission from the Division may re-enroll only one time for certification or licensure standards.
4 Units
54 Lecture hours
54 Lab hours

AUTO 155
Automotive On-Board Diagnostics Generations One and Two (OBD I and OBD II)
Prerequisite: AUTO 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 120
Transfer to: CSU
This course will provide students with the fundamentals of Automotive On-Board Diagnostics, Generations One and Two (OBD-I and OBD-II). Students will discuss the history, regulations, vocabulary, and diagnostic strategies of OBD-I and OBD-II equipped vehicles. Topics of discussion include Safety, Service Information Systems, Electrical Circuits, Symbols & Circuit Diagrams, and other Fuel & Ignition-related subjects. This course requires the student to have a solid background regarding the technical knowledge of basic Gasoline Engine Fuel and Ignition Systems. This course is designed for all automotive majors with a background in advanced emission repair.
3 Units
45 Lecture hours
27 Lab hours

AUTO 157
Automotive Specialized Electronics Training
Prerequisite: AUTO 106
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfer to: CSU
This course provides an overview of the principles of automotive electronics. Topics covered include electrical theory, fundamentals of circuit construction, computers, semiconductors, microprocessors, integrated circuits (IC), types of output signals, wire repair techniques, meter usage and strategy based diagnostics. A demonstration General Motors circuit board will be used to illustrate circuit board function. This course is designed for entry level technicians or students who need an understanding of the basics of automotive electronics.
4 Units
72 Lecture hours

AUTO 158
Automotive High Voltage Safety
Prerequisite: AUTO 157
Advisory: READ 043 or appropriate placement
Transfer to: CSU
This course continues the study of the use and service of hybrid electronic generation, plug-in battery-electric power, and fuel cell power generation for vehicles. Topics will include OSHA/NEC/NFPA high-voltage safety specifically for the service technician. Dynamics of high-voltage battery energy, hybrid generation systems, electric vehicle applications and their integrated systems from many manufacturers will be discussed. Battery storage systems for home charging usage as they apply to the home charging of a plug-in vehicle will also be addressed. High-voltage battery management systems including active/passive designs that control charging system safe operation, diagnosing with proper test tools and equipment, will be the primary focus of this course. This course is for students working in the hybrid/electric vehicle energy, fuel cell power engineering and technology fields.
2 Units
27 Lecture hours
27 Lab hours

AUTO 160
Upper End Engine Rebuilding and Machining
Prerequisite: AUTO 101 or AUTO 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfer to: CSU
This course provides occupational preparation in the skills required in the adjustment and repair of the modern automobile engine upper end and valve train assembly. Emphasis is placed on problem diagnosis, repair techniques, service procedures, and machining operations. This course prepares the student for the (ASE) Automotive Service Excellence A-1 exam and is intended for automotive majors. Students with permission from the Division may re-enroll only one time for certification or licensure standards.
4 Units
54 Lecture hours
54 Lab hours

AUTO 170
Lower End Engine Rebuilding and Machining
Prerequisite: AUTO 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 160
Transfer to: CSU
This course provides occupational preparation in the skills required for adjustment and repair of modern automobile engine lower end assembly. Emphasis is placed on problem diagnosis, repair techniques, service procedures, and machining operations. This course prepares students for the Automotive Service Excellence (ASE) A-1 exam and is intended for automotive majors.
4 Units
54 Lecture hours
54 Lab hours

AUTO 180
Advanced Automotive Diagnostic Procedures and Practices
Prerequisite: AUTO 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfer to: CSU
This course is designed to strengthen existing student skills in the field
of modern automotive technology, service, and repair. Course content includes an advanced study emphasizing the latest theories and principles of automotive diagnosis and troubleshooting procedures. Emphasis will be placed on advanced powertrain and powertrain management systems, electronically controlled systems, and vehicle network systems diagnosis and repair. The use of a variety of modern diagnostic tools and equipment is included.

3 Units
45 Lecture hours
27 Lab hours

AUTO 190
Engine Blueprinting & Machining
Advisory: AUTO 160 or AUTO 170; READ 043 or appropriate placement
Transfers to: CSU
This is an advanced course for students interested in engine blueprinting and engine machining practices. Topics include: cylinder block machining and preparation, cylinder head machining and repair, crankshaft materials and construction, connecting rod applications and machining, piston design and applications as well as camshaft lobe applications and profile analysis. Students must be proficient with basic precision instruments or have prior experience with engine machining or assembly practices. Emphasis will be placed upon engine blueprinting methods machining operations and component applications.

3 Units
45 Lecture hours
27 Lab hours

AUTO 200
Suspension, Steering, and Alignment Service
Prerequisite: AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course discusses the principles of suspension, steering and wheel alignment for modern imported and domestic automobiles and light trucks. Emphasis is placed on developing skills required in the diagnosis, and/or repair and adjustment to steering systems and wheel alignment angles. Complete suspension and steering system overhaul will be covered in the laboratory. Computerized wheel alignment and computerized wheel balancing equipment will be used / demonstrated. This course is designed for students wanting to work in the automotive sector or automotive technicians needing to improve their skills and knowledge in suspension, steering and alignment. Students with permission from the Division may reenroll only one time for certification or licensure standards.

4 Units
54 Lecture hours
54 Lab hours

AUTO 201
Automotive Brake and Suspension Service
Prerequisite: AUTO 102 or AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course discusses brakes and suspension theory of operation, service and repair procedures, related tool and equipment use and strategy based problem diagnosis. These procedures for imported and domestic automobiles and light trucks are developed through classroom discussions, demonstrations and laboratory experiences. This course is designed for students wanting to work in the automotive sector or automotive technicians needing to improve their skills and knowledge in brake and suspension service.

4 Units
54 Lecture hours
54 Lab hours

AUTO 210
Automotive Brake Systems
Prerequisite: AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course discusses modern disc and drum brake theory of operation, service and repair procedures, related tool and equipment use and strategy based problem diagnosis. These procedures for imported and domestic automobiles and light trucks are developed through classroom discussions, demonstrations and laboratory experiences. This course is designed for students wanting to work in the automotive sector or automotive technicians needing to improve their skills and knowledge in brake service. Students with permission from the Division may reenroll only one time for certification or licensure standards.

4 Units
54 Lecture hours
54 Lab hours

AUTO 220
Manual Drive Trains and Axles
Prerequisite: AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 125
Transfers to: CSU
This course discusses modern manual transmissions, transaxles, drivelines, differentials, and 4WD/4WD systems theory of operation, methods of repair, service, equipment operation and techniques of problem diagnosis. Procedures for import and domestic vehicles are developed through classroom discussion, demonstrations and laboratory experiences. This course prepares the student for the (ASE) Automotive Service Excellence A-3 Exam and is intended for automotive majors. Students with permission from the Division may re-enroll only one time for certification or licensure standards.

4 Units
54 Lecture hours
54 Lab hours

AUTO 230
Automatic Transmission/Transaxle
Prerequisite: AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 125
Transfers to: CSU
This course is designed to provide instruction in Automatic Transmission/Transaxle systems. Included will be the application of friction materials, planetary gear components, hydraulic components; both hydraulically controlled and electronically controlled, fluid types and sealing materials. The student will achieve skill in diagnosis, removal, disassembly, reassembly and rebuilding transmission units to manufacturer’s specifications and learn part nomenclature and function. Students with permission from the Division may reenroll only one time for certification and licensure standards.

4 Units
54 Lecture hours
54 Lab hours

AUTO 211
Antilock Brakes/Traction Control Systems
Prerequisite: AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; AUTO 210
Transfers to: CSU
This course is designed for students wanting to work in the automotive sector or automotive technicians needing to improve their skills and knowledge in modern Anti-lock and/ or Traction Control systems. This course will provide instruction in automotive anti-lock brake systems, traction control systems and vehicle stabilizing assist (VSA), including diagnosis, operation and maintenance of ABS/VC/VS/TA. The course will include the use of scanners, DVOM meters and lab-scopes in diagnosis of various ABS/VC/VS systems; both 2 wheel and 4 wheel systems will be covered.

3 Units
54 Lecture hours
AUTO 240
Heating and Air Conditioning
Prerequisite: AUTO 102 or AUTO 103
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to provide instruction on the operating principles of common automotive heating and air conditioning systems. Topics include new service equipment, contamination issues, servicing and diagnosing manual and automatic systems, and retrofitting R-12 systems to R-134a, as well as the rules of AQMD/EPA. Students will be given the opportunity to earn their certification license (EPA Rule 1411). Students with permission from the Division may enroll in this course only one time for certification or licensure standards.
4 Units
54 Lecture hours
54 Lab hours

AUTO 256
Automotive Scantools and Vehicle Network Systems
Prerequisite: AUTO 106
Advisory: READ 043 or appropriate placement; AUTO 150
Transfers to: CSU
This course is designed to enhance the student’s electrical and electronic diagnostic skills in both the automotive powertrain management spectrum. This course emphasizes an in-depth study of various automotive computer systems, vehicle communication network systems, as well as the latest Scantools available to help aid in diagnostics of these systems. Course content includes advanced electrical and electronic systems theory and diagnosis, OBD-I and OBD-II engine and transmission management systems, diagnostic, and basic vehicle network systems. The majority of the course content focuses on proper Scantool usage, including proper tool selection, updating software, identifying and using data streams, and understanding the numerous serial data protocols, including CAN data communications.
3 Units
54 Lecture hours

AUTO 260
Advanced Hybrid/Electric Vehicle
Prerequisite: AUTO 147
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; AUTO 157
Transfer to: CSU
This course continues the study of the use and service of Hybrid Electronic generation and Plug-in Battery power for vehicle transportation. The course is not for beginner technicians. Topics will include: OSHA/NEC/NFPA safety when using high voltage, vehicle maintenance, drivability conditions, inverter power transfer, battery storage technologies, regeneration of electrical power from kinetic energy, Level I, Level II, Level II battery charging and fuel cell technology. Dynamics of battery storage, Hybrid generation systems, Electric vehicle applications and their integrated systems from many manufacturers will be discussed. High-voltage battery management systems including active/passive design to charging systems will be primary focus of this course. This course is for student’s working in the Hybrid and Electric vehicle, power engineering and technology field.
4 Units
54 Lecture hours
54 Lab hours

AUTO 265
Fuel Cell Technology Fundamentals
Prerequisite: AUTO 147, AUTO 260
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; AUTO 106
Transfer to: CSU
This course creates the fundamental learning process of the different types of fuel cells and the application for power generation for mobile, vehicular, and stationary power. Topics will include: OSHA/NEC/NFPA safety standards when developing, servicing and working in a high voltage/power inverter transfer, battery storage technologies, regeneration of electrical power from kinetic energy. A descriptive overview of key fuel cell technologies including proton exchange membrane (PEM), direct methanol fuel cell, and solid oxide fuel cell will be provided together with potential applications for transportation, stationary, and portable power. Hydrogen production/storage will also be covered.
4 Units
54 Lecture hours
54 Lab hours

AUTO 290
Cooperative Work Experience/Internship for Automotive Technology
Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business and industrial establishments under the supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the automotive/transportation field and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 hours

AUTO 299
Directed Study in Automotive Technology
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Automotive Technology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

AUTO 300
Assessment of the Automotive Industry
Prerequisite: Enrollment requires an AS degree in Automotive Technology or similar field, and special approval from the program advisor
Advisory: PHY 120, ENGL 201 or ENGL 201H, and MATH 130 or MATH 130H or MATH 160
This course provides the Automotive Technology student with a detailed practical study of how to be successful in the Automotive Service, Parts, and Sales Industry. This is a practical study of current service, parts, and sales practices performed in dealerships and independent repair shops, while also discussing the review
and preparation of the theory and skills necessary to successfully pass the Automotive Service Excellence (ASE) Exams relevant to Industry Standards. Topics include becoming efficient in the shop, mastering the various pay systems, understanding managers and owners, building customer loyalty, demonstrating workplace and social ethics, and making Customer Satisfaction Index (CSI) values work for all employees. In addition, vehicle engines, transmissions, brakes, suspension, air conditioning, and engine performance systems, parts, and components, and new and emerging technologies that support the service and repair of the modern automobile will be discussed. Emphasis will be placed upon the important tasks of proper repair procedures, the safe use of tools, equipment, technical data, and scan tools, as well as the ins-and-outs of the business of service, parts, and sales. Current Automotive Industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle After-Sales Field Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 310
The Global Development and Advancement of the Automobile
Prerequisite: Enrollment requires an AS degree in Automotive Technology or similar field, and special approval from the program advisor
Advisory: PHY 120, ENGL 201 or ENGL 201H, and MATH 130 or MATH 130H or MATH 160
This course provides the Automotive Technology student with a detailed practical study of the development of the automobile from its beginnings to the present day. This is a practical study of the invention of the first suitable power source to be adopted to self-propel a road vehicle and how it resulted in a major paradigm shift to resolutions in transportation and the ability of individual mobility. Topics include the development of animal-drawn transportation devices and the quest for a prime mover, the pioneering era of the automobile and how it lead to it being an industrial product, mass-production of the automobile and how it became a consumer product, and new and emerging technologies that support the automobile and motorized traffic and transportation systems. Emphasis will be placed upon the global perspective, particularly the developments that occurred in the United States, Europe, and Asia, and the numerous technological and business revolutions of the first and second half of the 20th century. Current Automotive Industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle After-Sales Field Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 320
The Progressive Growth of Automotive Technology
Prerequisite: Enrollment requires an AS degree in Automotive Technology or similar field, and special approval from the program advisor
Advisory: PHY 120, ENGL 201 or ENGL 201H, and MATH 130 or MATH 130H or MATH 160
This course provides the Automotive Technology student with a detailed practical study of the development of Automotive Technology from its beginnings to the present day, focusing on the basics and its long-term development. This is a practical and contextualized study of the importance of the automotive technological changes that have evolved from both engineering improvements and cultural changes. Topics include the development of vehicle layout and design, the needs and behaviors of drivers, producers, non-users, and other stakeholders, and the ever-changing computerized control of its systems and other emerging technologies. Emphasis will be placed upon the systematic overview of the mechanization and electrification of the automobile, not only as machines, but as a testimony of their important role in the way we live today. Current automotive industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle After-Sales Field Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 330
Principles of Automotive Service Management
Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 130 or MATH 130H, PHY 120, MGMT 146
Advisory: ENGL 325
This course provides the Automotive Technology student with a detailed practical study of the management of an automotive and/or transportation-related business. This is a practical and contextualized study of the importance of business practices of the automotive industry that have evolved from dealerships, franchises, and independently-owned service operations. Topics include an understanding of automotive business regulations in the areas of competition, labor laws, securities regulation, corporate law, and environmental laws. Emphasis will be placed upon an overview of basic business structure, ownership, and various facilities, as well as service operations & management, financial & marketing issues, and customer/employee relations. Current Automotive Industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment.

3 Units
54 Lecture hours

AUTO 340
Analyzing Vehicle Electrical/Electronic Systems
Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 160, PHY 120
Advisory: ENGL 325
This course provides the Automotive Technology student with a detailed practical application of Electrical and Electronic Systems of the Modern Automobile. This is a practical study of computerized vehicle controls and diagnostic strategies as it pertains to the function, operation, and vehicle on-board diagnostic and communication systems of the engine, powertrain, brakes, suspension, safety, convenience, and emission control systems. Topics include emerging technologies, such as modern instrumentation, navigation, and telematics, and the use of vehicle network configuration systems used by late-model automotive manufacturers. Emphasis will be placed upon the design of system parts, components, subsystems, and their operational characteristics, including programmed microprocessors, microcontrollers, and computer-language protocol. Current Industry-approved diagnostic, troubleshooting, and reprogramming techniques and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle After-Sales Field Operations Management spectrum.

3 Units
54 Lecture hours
in the Vehicle Sales and Service Fixed Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 360
Analyzing Vehicle Fuels, Lubricants and Combustion
Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 160, PHY 120
Advisory: ENGL 325
This course provides the Automotive Technology student with a detailed practical application of Fuels, Lubricants, and Combustion of the Modern Automobile. This is a realistic study of the physical and chemical properties of fuels, lubricants, and combustion, including diagnostic strategies as it pertains to the function, operation, and everyday use of the systems and sub-systems of the automotive internal combustion engine and related powertrain components. Topics include emerging technologies, such as modern fuel and lubricant requirements and how they affect combustion, emissions, and maintenance schedules used by late-model automotive manufacturers. Emphasis will be placed upon the design of system parts, components, subsystems, and their operational characteristics, including failure analysis. Current Industry-approved diagnostic and troubleshooting techniques and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle Sales and Service Fixed Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 370
Standard Accounting Systems of the Automotive Industry
Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 130 or MATH 130H, PHY 120, ACCT 101
Advisory: ENGL 325
This course provides the Automotive Technology student with a detailed practical application of accounting fundamentals and business management principles, and the adaptation of them to factory-to-store and day-to-day operations. This is a practical study of the theory, principles, and practice of the preparation and interpretation of accounting statements and business management reports. Topics include an overview of computerized accounting information systems, and practices in business management techniques, such as the importance of strong financial and management control, financial statements and statement analysis. Emphasis will be placed upon the concepts of using accounting fundamental principles, cash & contracts, short-term and long-term liabilities and assets, and stockholders' equity of reporting documents, which are essential to a successful automotive business operation. Current Automotive Industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle Sales and Service Fixed Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 400
Analyzing Stability, Dynamics, and NVH
Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 160, PHY 120
Advisory: ENGL 325
This course provides the Automotive Technology student with a detailed practical application of Stability, Dynamics, and Noise-Vibration-Harshness (NVH) of the Modern Automobile. This is a practical study of the systems that provide vehicle operation safety, including diagnostic strategies as it pertains to the function, operation, and every-day use of the automotive tires, brakes, steering, and suspension systems. Topics include emerging technologies, such as modern antilock brakes, traction control, electronic stability assist, electronic power steering, active suspension, and tire construction and pressure monitoring systems used by late-model automotive manufacturers. Emphasis will be placed upon the design of system parts, components, subsystems, and their operational characteristics, including techniques in reducing NVH. Current Industry-approved diagnostic and troubleshooting techniques and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle Sales and Service Fixed Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 420
Analyzing Dynamic Functions of Vehicle Drivetrain Systems
Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 160, PHY 120
Advisory: ENGL 325
This course provides the Automotive Technology student with a detailed practical application of Electro-Mechanical and Hydraulic Functions of Transmission and Drivetrain Systems of the Modern Automobile. This is a practical study of systems that provide vehicle mobility, including diagnostic strategies as it pertains to the function, operation, and everyday use of the automotive transmission, differential, and drive axle systems. Topics include emerging technologies, such as modern dual-clutch transmissions, continuously-variable transmissions, real-time gear shifting mechanisms and controls, torque converter and converter clutch designs, torque-management strategies, and innovative designs of gears, bearings, seals, and friction materials used by late-model automotive manufacturers. Emphasis will be placed upon the design of system parts, components, subsystems, and their operational characteristics, including techniques in reducing Noise-Vibration-Harshness (NVH). Current Industry-approved diagnostic and troubleshooting
Security Systems
Analyzing Vehicle Safety, Comfort, and

AUTO 440
Finance & Insurance Regulations for the
Automotive Industry

Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 130 or MATH 130H, PHY 120
Advisory: ENGL 325

This course provides the Automotive Technology student with a detailed practical application of the numerous federal, state, and local agencies and their laws and regulations pertaining to the operation of an automotive wholesale and retail business. This is a practical study of a broad scope of regulatory agencies and regulations such as Department of Motor Vehicles, Internal Revenue Service, Franchise Tax Board, OSHA, EPA, AQMD, NHTSA, Federal Trade Commission, Fair Labor Standards, Truth in Advertising, Truth in Lending, Consumer Leasing Act, Equal Credit Opportunity Act, Fair Credit Reporting Act, and other related agencies and regulations. Topics include an in-depth study of automotive business finance, insurance, and new and certified used vehicle departments within an organization. Emphasis will be placed upon the services offered in these departments and their potential of generating profits and improving customer satisfaction. Current Automotive Industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle After-Sales Field Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 450
Variable & Fixed Operations of the
Automotive Industry

Prerequisite: AUTO 300, AUTO 310, AUTO 320, ENGL 201 or ENGL 201H, MATH 130 or MATH 130H, PHY 120
Advisory: ENGL 325

This course provides the Automotive Technology student with a detailed practical application of successful automotive business models of new and used vehicle operations, as well as the operations of service and parts. Topics include an in-depth study of facilities and shop utilization, scheduling of work, sales promotions, using advertising media, inventory control, repair order generation and control, selecting and motivating employees, and directing sales, parts and service staff. Emphasis will be placed upon analyzing and balancing inventory turnover, wholesale practices, trade-in appraising, vehicle reconditioning, the role that auctions play, the important relationship between the parts and service departments, technician productivity and efficiency, wholesale and retail parts sales, stock and non-stock parts inventory and ordering practices, and parts phase-in/phase-out criteria. Current Automotive Industry practices and relevant case studies will be discussed and demonstrated throughout the course. The overall goal of this course is for the student to apply and demonstrate knowledge and skills that will enable them to advance their employment in the Vehicle Sales and Service Fixed Operations Management spectrum.

3 Units
54 Lecture hours

AUTO 499
Directed Study in Automotive Technology

Prerequisite: Enrollment requires an AS Degree in Automotive Technology or similar field, and special approval from the program advisor; AUTO 440; AUTO 450
Advisory: ENGL 201 or ENGL 201H, MATH 130 or MATH 130H, or MATH 160, PHY 120

The course provides an opportunity for the Automotive Technology student to expand their studies in the Bachelor of Science Degree beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contact the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students are required to take 4 units of Directed Study within a discipline to graduate with a Bachelor of Science degree in Automotive Technology.

4 Units
72 Lecture hours

BIOLOGY
Division of Mathematics, Sciences, and Engineering

BIOL 101
General Biology

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement
Transfers to: UC (credit limit*), CSU (*No credit will be given for BIOL 101 if taken after BIOL 200)

General Biology 101 is a general education course, open to all students, and is designed to provide an introduction to concepts and principles of modern biology. Topics covered will include cell structure and function, energy relationships, genetic control mechanisms, concepts of evolution, biological diversity, and ecosystem function. The laboratory component of the course emphasizes the applica-
tion of the scientific method as a tool to understand living systems.

4 Units
54 Lecture hours
54 Lab hours

Biol 105
Human Biology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course will provide an introduction to the basic principles, structures, functions and biological processes of the human body. This lecture only course will emphasize a scientific viewpoint of the workings of the human body and its interactions with the environment as well as the necessary practices needed to promote a healthy body. The course’s target audience are those students pursuing a liberal arts education who are interested in furthering their own knowledge of human biology.

3 Units
54 Lecture hours

Biol 105L
Human Biology Laboratory
Prerequisite/Corequisite: Biol 105
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This laboratory course is intended for non-Biology majors as an accompaniment to the lecture course (Biol 105). The course will provide students with hands-on laboratory experiences to demonstrate and enhance concepts and principles essential to an understanding of the functions of the human body.

1 Unit
54 Lecture hours

Biol 111
Marine Biology Laboratory
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This laboratory course complements the Marine Biology lecture course and is designed for the student interested in furthering their understanding of the marine environment and its organisms, with emphasis on marine life of the local coast. The scientific method will be employed to investigate the chemical and physical properties of seawater, the role of pigments in marine algae, the behavior of marine organisms, the basic classification and morphology of marine producers, invertebrates and vertebrates, and adaptations of organisms to specific habitats. Students will use basic laboratory equipment and techniques in both classroom and field-based investigations. Field trips to coastal marine habitats and public aquaria are conducted.

1 Unit
54 Lab hours

Biol 112
Outdoor Biology
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 053 or MATH 033B or appropriate placement
Transfers to: UC, CSU
This course is intended for the student who has an interest in the natural world and the ecological relationships of the organisms found within it. The course emphasizes the natural habitats of Southern California and the plants and animals associated with them. Also discussed is the impact human beings have had upon these natural habitats. Field work utilizes the Rio Hondo College Wildlife Sanctuary which allows students to gather original data through firsthand observation and experience. Several additional more distant trips requiring driving explore some of the variety of natural habitats in Southern California.

4 Units
54 Lecture hours
54 Lab hours

Biol 120
Environmental Biology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: UC, CSU
Utilizing basic biological concepts, an interdisciplinary approach is used to address environmental challenges. Topics addressed may include ecosystem characteristics and functions, population dynamics, energy and material resource use, pollution, and alternative energy sources. Students in many disciplines will benefit from this course as the social, political, and economic implications of environmental decisions are addressed. This course fulfills the general education requirement in life sciences.

3 Units
54 Lecture hours

Biol 120L
Environmental Biology Laboratory
Prerequisite/Corequisite: Biol 120
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC, CSU
This laboratory course compliments the Environmental Biology lecture course and is designed for students interested in furthering their understanding of the environmental sciences. The scientific method will be employed to investigate ecosystems and their functions, natural selection, population interactions, environmental toxicology, radiation exposure effects, soil and groundwater systems, water pollution, alternative energy systems, and environmental resistance.

1 Unit
54 Lab hours

Biol 125 (C-ID BIOL 110B)
Human Anatomy
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement; BIOL 101, BIOL 105
Transfers to: UC, CSU
This course is primarily a systems approach to the study of human body structure. The study of each body system includes structural specializations and functions from the microscopic to the system level emphasizing the interdependence of form and function. Additional topics include methods of anatomical study, human genetics, and embryonic development. The laboratory exercises will also include vertebrate dissections. This course is intended for students preparing to enter careers in the health sciences.

4 Units
54 Lecture hours
54 Lab hours
BIOL 200 (C-ID BIOL 135S, BIOL 190)
Principles of Biology 1 (Molecular and Cellular Biology)
Prerequisite: CHEM 120 and MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is first in a sequence of courses for undergraduate preparation for biology majors. This course will cover principles and applications of prokaryotic and eukaryotic cell structure and function, biological molecules, homeostasis, cell reproduction and its controls, molecular genetics, classical/Mendelian genetics, cell metabolism including photosynthesis and respiration, and cellular communication. Additional areas of focus include evolution and ecology. The laboratory portion of the course applies the processes of scientific inquiry and experimental design to the study of biological concepts focusing on observations, experimentation, record keeping, data collection and analysis, and presentation of outcomes. The course sequence also provides excellent preparation for those students intending to pursue post-graduate studies in the medical sciences.
5 Units
54 Lecture hours
108 Lab hours

BIOL 201 (C-ID BIOL 135S)
Principles of Biology 2 (Diversity and Ecology)
Prerequisite: BIOL 200
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course continues the sequence of undergraduate preparation for biology majors. The course is a survey of the diversity of unicellular and multicellular life on earth, focusing on the relationships between structure and function, as well as evolutionary adaptations to their environments. Topics deal with classification, development, evolutionary relationships and ecological functions of living organisms inclusive of prokaryotes, fungi, protists, plants and animals. Laboratories will emphasize life forms, experimentation and dissections. Field trips will be used to examine organisms in their natural settings.
5 Units
54 Lecture hours
108 Lab hours

BIOL 205
Molecular Biology and Biotechnology
Prerequisite: BIOL 200; CHEM 130
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for Life Science majors and introduces them to the basic concepts of biochemistry, molecular biology and molecular genetics; including protein structure and function, DNA structure and replication, transcription, RNA processing, translation, and recombinant DNA technology. Students will also be introduced to the science of biotechnology by providing both the theory and hands-on experience with laboratory protocols that include the isolation, purification, and cloning of a gene; including the use of restriction enzymes, electrophoresis, library construction, blotting and hybridization and sequencing. Polymerase chain reaction (PCR) will be explained in detail, particularly how it has revolutionized research in molecular biology, medicine, forensics, systematics and evolutionary biology.
4 Units
54 Lecture hours
54 Lab hours

BIOL 206
Principles of Genetics
Prerequisite: BIOL 200
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: UC, CSU
This course is designed for Life Science majors as a continuation of their general biology studies. This course will cover a variety of topics relevant to the study of genetics, ranging from classical to nontraditional Mendelian genetics, from bacterial and viral genetics to human genetics, and include studies on molecular techniques and their applications. Other topics will include chromosome analysis, population genetics and genomics.
3 Units
54 Lecture hours

BIOL 222
Microbiology
Prerequisite: CHEM 110
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; BIOL 101
Transfers to: UC, CSU
The course encompasses the biology of microorganisms with an emphasis on the role of bacteria and viruses on human health and disease. Other topics include resistance and immunity to disease, basic biological principles, microbial genetics and physiology, the harmful and useful aspects of microorganisms in nature, medicine and industry. Laboratory exercises emphasize sterile culture techniques, the detection, isolation and identification of microorganisms. This course is intended for students preparing to enter careers in the health sciences.
5 Units
54 Lecture hours
108 Lab hours

BIOL 226 (C-ID BIOL 120B)
Human Physiology
Prerequisite: BIOL 125 and CHEM 110
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; BIOL 101
Transfers to: UC, CSU
Human Physiology provides a general introduction to the functions and regulation of human body systems. Physiological integration of the systems to maintain homeostasis and the significance of biochemistry is emphasized throughout the course. Course content will include neural and hormonal homeostatic control mechanisms, and a study of the musculoskeletal, circulatory, respiratory, digestive, urinary, immune and endocrine systems. Laboratory exercises will allow students to gather physiological data and draw conclusions on how physiological mechanisms are regulated. This course is intended for students preparing to enter careers in the health sciences.
4 Units
54 Lecture hours

BIOL 299A
Directed Study in Biology
Prerequisite: BIOL 200
Transfers to: CSU
The course provides an opportunity for the student to expand their studies in Biology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units

BIOL 299B
Directed Study in Health Science Biology
Prerequisite: BIOL 222 or BIOL 226
Transfers to: CSU
The course provides an opportunity for the student to expand their studies in Health Science Biology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.

1 to 3 Units
54 to 162 Lab hours

BIOT 100
Introduction to Biotechnology
Prerequisite: BIOL 120
Transfers to: CSU

The course will introduce students to the study of the biological sciences with an emphasis on the role that biotechnology plays in basic research and product development. The laboratory component will provide the students with hands-on introductory experiences in biotechnology techniques.

4 Units
54 Lecture hours
54 Lab hours

BIOOT 110
Introduction to Biotechnology Techniques and Applications
Prerequisite BIOT 100
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

The course will introduce students to biotechnological techniques and their applications. The significant laboratory component will enable students to become familiar with the techniques and concerns of the biotechnology laboratory and its business applications. Techniques studied will include macromolecule isolation, purification and identification, solution preparation and monitoring, as well as best practices for laboratory operation and documentation.

4 Units
36 Lecture hours
108 Lab hours

BUSL 110 (C-ID BUS 120)
Legal Environment of Business
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (*credit limit), CSU (*Students will receive credit from UC for only one of the following courses: BUSL 110 or BUSL 220)

This course examines the legal regulatory, and international environment of business. Included are the topics of alternative dispute resolution, the forms of business organization, regulations affecting employment, and current environmental statutes. Case studies are used to discuss torts, crimes, contracts and sales, warranty and product liability, labor law, employment discrimination, and environmental law.

3 Units
54 Lecture hours

BUSL 110 (C-ID BUS 120)
Legal Environment of Business
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (*credit limit), CSU (*Students will receive credit from UC for only one of the following courses: BUSL 110 or BUSL 220)

This course examines the legal regulatory, and international environment of business. Included are the topics of alternative dispute resolution, the forms of business organization, regulations affecting employment, and current environmental statutes. Case studies are used to discuss torts, crimes, contracts and sales, warranty and product liability, labor law, employment discrimination, and environmental law.

3 Units
54 Lecture hours

Carpentry
Division of Career & Technical Education

CARP 020H
Welding
Prerequisite: Indentured Apprentice with the State of California
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry. Modules cover the following topics: history of the carpentry profession along with state and federal labor law, job layout, safe working conditions, health and safety certifications, basic blueprint reading, advanced blueprint reading, use and application of levels and transits, foundations, flatwork, wall structures, stairs and ramps, welding materials and welding applications.

1 Unit
20 Lecture hours
20 Lab hours

CARP 040A
Orientation
Prerequisite: State Indentured Carpenter Union Apprentice
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the Carpenter Industry by examining fundamental trade skills, employee-employer roles and responsibilities, and safe work practices needed for entry level performance in the construction industry. While emphasis will be placed on attaining standard industry safety credentials, the course is designed to provide students with practical experience using construction terminology, math operations and basic measuring techniques, tool identification and proper usage. Safety will cover OSHA training for jobsite hazard recognition, accident prevention, and safe tool and equipment operation. Upon successful completion, students will receive
Occupational Safety and Health Administration (OSHA) 10 Hour Certification.
2 Units
30 Lecture hours
10 Lab hours

Carp 040b
Safety and Health Certifications
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the Carpentry Industry by covering safe and appropriate use of hazardous communication systems, fall protection, fork lifts, and emergency response procedures. Students will acquire the ability to assess danger, employ prevention measures, and take appropriate action in emergencies. This training will expose students to various health emergency scenarios and provide students with ample opportunities to practice CPR and first aid response.
Upon successful completion, students will be issued an American Red Cross First Aid/CPR Certification Card, and United Brotherhood of Carpenters (UBC) Fall Protection, Hazard Communication and Chemical Safety, and Forklift Qualification Cards.
2 Units
30 Lecture hours
10 Lab hours

Carp 040d
Transit Level/Laser
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing terminology, optical principles and operating procedures for the transit laser levels. The conventional methods for measuring angles, using degrees, minutes and seconds on vaneer scales will be included in the transit portion of this class. Students will set up levels, determine benchmarks, take and record elevation readings.
2 Units
30 Lecture hours
10 Lab hours

Carp 040e
Foundations and Flatwork
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the required and supplemental instruction for the design and function of several types of foundations and concrete flatwork. The methods, techniques and procedures for formwork layout, elevation, and construction will be presented. Jobsite safety, print interpretation, material identification, and basic use of the builders' level will be included in the training.
1.5 Units
20 Lecture hours
20 Lab hours

Carp 040f
Wall Forming
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the skills and procedures for forming reinforced concrete walls using single and double water systems. Identification of the characteristics and applications of built-in-place, prefabricated and specialty forms will be covered. Practical exercises will prepare students for locating wall forming information on project plans, calculating layout dimensions, and for estimating material requirements. Basic wall panel forming and reinforcement methods, material preparation and hardware installation are included in this course.
1.5 Units
20 Lecture hours
20 Lab hours

Carp 040g
Stair and Ramp Forming
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing methods, procedures and practices used to form stair and ramp structures. Students will review project plans to determine stair and ramp configuration and overall dimensions. Stinger riser and stair thread calculations will be explained and practiced. State and federal building codes pertaining to stairs, ramps and handrail requirements will be covered in this class.
1.5 Units
20 Lecture hours
20 Lab hours

Carp 040h
Commercial Floor Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing procedures for floor joist construction and the various installation techniques used in the commercial industry. Students will interpret floor plans for job planning, identify floor joist system, and calculate material take offs. Integration of wall plating, joist layout and floor sheathing methods will be included. Instruction will incorporate measuring skills, use of math operations, specialty hardware applications and identification of appropriate building codes.
1.5 Units
20 Lecture hours
20 Lab hours
CARP 040I
Basic Roof Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing an introduction to basic gable roof framing, terminology, characteristics and construction methods. Students will interpret print views and drawing elevations for job planning, and to determine rafter systems and layout details. Basic rise, run, rafter angles and length calculations will be practiced. Framed wall construction will be incorporated to facilitate the gable roof assembly procedures that are the focus of this course.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 040J
Advanced Print Reading
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the Carpentry Industry by providing the required and supplemental instruction for carpentry apprentices in advanced print reading. In this course, students will analyze multi-view drawings to determine construction type, locate benchmark and building elements; review codes, references, and perform calculations for construction planning. A closer look at specifications (verbal communication), will explain to students how they are formatted and used to clarify the specific project design outcomes. Tips for troubleshooting installations, code compliance, and managing project scope and quality of construction will prepare students for jobsite leadership.
2 Units
30 Lecture hours
10 Lab hours

CARP 040K
Rigging
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing lifting and practical rigging methods and procedures. This course provides a historical perspective while educating workers on the industry recognized standards, applicable regulations, specific hazards, and general safety concerns associated with construction rigging. Detailed descriptions of hoisting and rigging configurations, lifting hardware, crane types and operating issues will be presented. This training will identify standard signaling and communication methods, and stress the importance of load calculations, manufacturer load limits, inspection criteria, and safe operator/operating parameters applicable to the carpenter trade. Upon successful completion, students will receive UBC Rigging Qualification Card.
2 Units
30 Lecture hours
10 Lab hours

CARP 040L
Solar Installer Level I
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are in the carpentry industry. This course begins with a detailed explanation of sustainable building science, recycling of materials, whole house audits, and discussion of construction components and systems that contribute to energy efficiency. The differences in structural design such as joints, framing, windows and door openings, floor and attic will be evaluated for issues related to air flow and stack effect in conditioned spaces. Instruction will include thermal principles, air exchange rates, controlling air leakage, and ratings for insulation, and fenestration, as well as air sealing methods. Best practices for renovation construction will be demonstrated during practical exercises focused on implementing energy audit recommendations for insulation, air leak/duct sealing, window replacement, water conservation, hazard and moisture remediation, and appliance upgrades (CAZ). Techniques and devise used to maintain healthy air quality during construction will be employed for applicable activities.
1.5 Units
20 Lecture hours
20 Lab hours
CARP 040S
Tool/Equipment Applications
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry. This course presents the theory, methods, and procedures required to frame basic walls. Hands-on practice using proper tool techniques and appropriate materials will enhance fundamental skill development. Beginning with an introduction to print reading, students will perform basic wall layout, plating procedures, framing assembly and bracing, before aligning and completing selected wall construction project to industry standards.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 040R
Basic Metal Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry. This course will present the theory, mathematical principles, wall and roof framing theory and commercial construction techniques and materials. Floor plan interpretation will be used by students for job planning, design recognition, and to determine materials. Students will layout and detail wall plates for locating basic rake wall components and door openings typically found in commercial construction applications. Instruction will include measuring skills, mathematical principles, wall assembly and installation procedures and detail on how structural connections are made.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 040T
Erector-Welded Frame Qualification
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the installation process from constructing storefront openings thru placement of glass components into the commercial store front metal framing. An emphasis will be placed on print interpretation, window and door schedules, symbols and material recognition. Key discussions will draw attention to the typical problems, causes and solutions frequently encountered during the glazing assembly and installation process. This training will utilize glazing tools and techniques, applicable building/fire codes, layout accuracy and address proper fit and alignment.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050A
Basic Commercial Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing procedures for design layout, cabinet installation and attaching countertops. An emphasis will be placed on print interpretation, job planning, scribing techniques and proper installation sequence. Students will use methods and specific procedures to install typical upper and lower cabinetry units and countertops.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050B
Cabinet Installation
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing procedures for design layout, cabinet installation and attaching countertops. An emphasis will be placed on print interpretation, job planning, scribing techniques and proper installation sequence. Students will use methods and specific procedures to install typical upper and lower cabinetry units and countertops.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050C
Doors and Door Hardware
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing procedures for design layout, cabinet installation and attaching countertops. An emphasis will be placed on print interpretation, job planning, scribing techniques and proper installation sequence. Students will use methods and specific procedures to install typical upper and lower cabinetry units and countertops.
1.5 Units
20 Lecture hours
20 Lab hours
by providing the installation process for several types of security and exit door hardware. Discussion of electrical and card reader systems will be included. An emphasis will be placed on print interpretation, codes, door schedules, symbols, and hardware recognition. Students will use the methods and procedures presented to install selected door and hardware systems.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050D**
**Basic Stairs**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing an introduction to stair framing theory, terminology and construction techniques. Students will interpret floor plans and drawing elevations for job planning and to layout and detail stair stringers. Methods for calculating the number of stairs, landing height, stair threads and riser dimensions will be presented and practiced. Instruction will include measuring skills, mathematical principles, stair and handrail fabrication, assembly and installation.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050E**
**Bridge Construction**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing bridge design and construction methods and procedures. Students will construct bridge and deck formwork using job-built forming methods. Descriptions for exterior and interior girders, edge forms, bulkheads and hinge forms will be presented. Both job-built and precast formwork methods will be discussed. Formwork project will include panel construction, assembly, and hardware installation tasks. Related safety, math and print reading will be covered in the training.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050F**
**Tilt Up Construction**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing layout techniques and building procedures for commercial structures using the tilt up panel construction method. Various wall types, position and sequence for raising panels will be discussed. Students will be able to explain the importance of layout methods in squaring panel formwork. A focus will be placed on identifying specific types of openings and the location of finish floor and roof lines on prints.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050G**
**Beam and Deck Forming**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing an introduction to the use of various woods and patented forming systems for construction of concrete beams and decks. Students will identify formwork types and installation techniques including calculating materials and setting beam and deck forms. Metal beam forms and capitals will be highlighted. Additional layout and builder level skills will be used in this class.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050H**
**Gang Forms/Columns**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing an introduction to formwork types, applications and construction methods for gang and column forms using built and manufactured forming systems. Discussions will cover heavy timber gang forms and use of taper ties, bracing, and bulkhead tables. The course project will include gang and column formwork construction, assembly, and hardware using selected manufactured products. Related safety, math and print reading will be covered in this course.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050I**
**Abutments**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing formwork construction skills for the abutment support structure used in most bridge and heavy highway projects. Students will identify abutment anatomy and will be instructed on footing layout, form detailing and construction techniques used in the industry. Terminology, components, form materials, building code requirements and sequence of construction will be presented. Students will work collectively to complete an abutment formwork project including keyway, panel, head wall and wing wall construction.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**

**CARP 050J**
**Exterior Finish Details**

*Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B*

*Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement*

This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing an introduction to the use of various woods and patented forming systems for construction of concrete beams and decks. Students will identify formwork types and installation techniques including calculating materials and setting beam and deck forms. Metal beam forms and capitals will be highlighted. Additional layout and builder level skills will be used in this class.

**1.5 Units**
**20 Lecture hours**
**20 Lab hours**
materials, identifying wall covering types and other exterior construction details. Students will use the constructions techniques presented to complete various exterior detail installations to print specifications.

1.5 Units
20 Lecture hours
20 Lab hours

CARP 050K
Advanced Stairs
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing basic stair construction before presenting advance skill needed to perform circular and “u” shaped stair framing tasks. Students will interpret floor plans and drawing elevations for job planning and to layout and construct advanced stair designs. Students will adapt stair calculations to determine the number of stairs, landing height, stair thread and riser dimensions. In addition to measuring skills, mathematical principles, stair and handrail fabrication and assembly, the installation techniques required for circular and “u” shaped stair configurations will be covered.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050L
Advanced Commercial Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing advanced commercial wall framing theory and construction techniques with structural hardware and shear panel installation. Students will interpret floor plans for job planning and to layout and detail plates for complex wall configurations, rake walls and openings. Instruction will include measuring skills, use of mathematical principles, advanced rake wall construction design, plywood shear panel installation, and structural hardware attachment.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050M
Bridge Falsework
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing bridge falsework design and construction methods and procedures. The techniques for bent assemblies, base sub-assemblies, deck soffits and hardware installation will be presented. Falsework tasks will include rigging and alignment techniques. Related safety, math and print reading will be covered in the training.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050N
Advanced Roof Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the advanced skills used to frame hip roof types, terminology, roof characteristics and construction methods. Students will interpret print views and elevations for job planning to determine hip roof rafter systems and layout details. Students will perform rise, run, rafter angles and length calculations. Framed wall construction will be incorporated to facilitate the hip roof assembly techniques and installation procedures.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050P
Panelized Roofing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the structural components and building techniques associated with heavy timber construction and panelized roof systems. The advantages and types of manufactured wood used, and their load carrying strength, span and spacing will be discussed. A distinction between standard post and beam, and heavy timber construction will be emphasized. Students will interpret floor plan, section views and drawing elevations for job planning, and to layout and construct a heavy timber post and beam supported panelized roof.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050R
Intermediate Commercial Framing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course enhances basic wall framing theory, and wall construction techniques are applied at increased skill levels. A review of basic wall framing and floor plans used for job planning, design recognition, and materials lists is included. Students will layout and detail wall plates for locating basic wall components and door openings. Instruction will include measuring skills, mathematical principles, wall assembly and installation procedures, and detail how structural connections are made.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050S
Intermediate Stairs
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course uses floor plans and print elevations at an intermediate level to enhance development of basic stair construction skills. Students will interpret prints to complete job planning, project layout, and material cut list for “L” shaped stair designs. Stair calculations will used to determine the number of stairs, landing height, stair thread and riser dimensions for the assigned project.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050T
Drywall Applications
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
This course uses floor plans and print elevations at an intermediate level to enhance development of basic stair construction skills. Students will interpret prints to complete job planning, project layout, and material cut list for “L” shaped stair designs. Stair calculations will used to determine the number of stairs, landing height, stair thread and riser dimensions for the assigned project.
1.5 Units
20 Lecture hours
20 Lab hours
CARP 050V
Interior Evaluations
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course covers the techniques and skills used in construction of interior spaces. Print elevation views and details will be utilized for job planning, design recognition, and to determine materials. Students will layout and detail interior walls, surfaces for arches, soffits, and trim installation. Instruction will include a review of transit and builder levels, measuring skills, and cutting techniques for inside/outside corners and radius cuts.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 050U
Welding Fabrication
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed as an introduction to layout, and basic welding and fabrication. The students will be introduced to the basic skills of measuring, equipment set-up and cutting, shaping, grinding, welding, filing, heating and bending of metal parts. Training will include fundamental arc welding techniques to fabricate project components.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060A
Cabinet, Millwork and Assembly
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing details of cabinetry fabrication from design and function through the complete production process. An emphasis will be placed on print interpretation, job planning and proper construction sequence. Countertops and hardware styles and types will be discussed. Students will use the methods and procedures presented to build typical base casework to industry standards.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060B
Plastic Laminates
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by covering the materials, tools, and adhesive application techniques for fabricating plastic laminated countertops. This course covers installation of plastic laminates including function and design. Students will review prints to determine substrates, laminate material types and to calculate countertop dimensions. Installation methods and techniques for drop edge and back splash together with cleaning and repair will be emphasized. A countertop will be designed and installed to specifications. Correct use of tools and other equipment will be stressed.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060C
Doors and Door Frames
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the installation process from constructing rough openings to hanging and adjusting doors. An emphasis will be placed on print interpretation, door schedules, symbols and hardware recognition. Students will use the methods and procedures presented to install selected frames and doors.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060D
Stair Trim
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing how various trims are utilized to finish stair construction design features. Students will use the techniques presented to complete a stair, railing and wall project. Product styles, characteristics, applications, and installation methods are included in the discussions. The tools techniques for cutting materials, mitering corners, and installing selected trim types are presented and practiced throughout the training.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060E
Commercial Fixtures
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing print interpretation and fabrication techniques used in the preparation and installation of commercial store fixtures. An emphasis will be placed on pre-job planning, proper hand and power tool use and safety measures. Students will apply the procedures presented to complete valance and wall panel installations.
1.5 Units
20 Lecture hours
20 Lab hours
Carp 060G
Exit & Electrical Security Devices
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the classifications, attachment methods and installation techniques for various fitting room and partition fixtures. Framing elements, mounting brackets, and panel products will be covered. The procedures presented will be applied during fitting room and partition application projects.
1.5 Units
20 Lecture hours
20 Lab hours

Carp 060H
Solid and Stone Surfaces
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing instruction on working drawings used in the designing and building of a project. Instruction will include an explanation of the methods and procedures used to identify components and materials needed to finish the project. Students will study floor plans, elevations and details drawings to determine design, wood types, style and features of construction and assembly details.
2 Units
30 Lecture hours
10 Lab hours

Carp 060J
Power Tools and Stationary Equipment
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing instruction on power tools and stationary equipment typically used in millwork production. Students will identify the appropriate procedures and machining operation for various milling applications. Practical exercises will focus on shaping materials using various types of stationary saws, planes, sharpeners and power tools.
1.5 Units
20 Lecture hours
20 Lab hours

Carp 060K
Print Reading and Stock Billing
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing instruction on working drawings used in the designing and building of a project. Instruction will include an explanation of the methods and procedures used to identify components and materials needed to finish the project. Students will study floor plans, elevations and detail drawings to determine design, wood types, style and features of construction and assembly details.
2 Units
30 Lecture hours
10 Lab hours
Work industry by providing details of cabinetry fabrication from design and function through the complete production process. An emphasis will be placed on print interpretation, job planning and proper construction sequence. Countertops and hardware styles and types will be discussed. Students will use the methods and procedures presented to build typical base casework to industry standards.

1.5 Units
20 Lecture hours
20 Lab hours

CARP 060N
Laminates and Overlays
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the mill and cabinet work industry. This course covers how moldings and trims are utilized to finish wall and cabinets. Students will be introduced to product styles, characteristics, millwork and specialty applications and installation methods are included in this training. The tool techniques for milling profiles, measuring and cutting, coping and installing various molding, trim and specialty items are presented and practiced throughout this course.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060P
Jigs, Fixtures and Accessories
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the mill and cabinet work industry by providing instruction for computerized software used to create production drawings and cabinetry designs. Training will include a brief review of basic computer operations, access to software, internet and email programs. Students will become familiar with the organization of computer-aided design software (AutoCAD 2014) user interface, basic drawing commands and file saving tools. Discussion will include an overview of computer-aided manufacturing (CAM) from design to production. Students will use CAD drawing tools to create a base cabinet design.
2 Units
40 Lecture hours

CARP 060R
Millwork and Specialty Applications
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the mill and cabinet work industry. This course covers how add-on equipment makes work easier and improves productivity. Students will use the techniques presented to select and attach accessories and to fabricate custom jigs.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 060S
Computerized Project Planning and Estimating
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the mill and cabinet maker industry by providing instruction for computerized software used to plan and estimate material and labor costs in Microsoft (MS) Windows, Word, and Excel worksheets.
2 Units
40 Lecture hours

CARP 060V
Building Information Modeling Concepts
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the mill and cabinet maker industry by providing instruction for computerized software used in project management planning, workflow and troubleshooting. Training will begin with a brief review of basic computer operations, access to software, internet and email programs. Students will navigate building information modeling (BIM) project data to grasp basic concepts related to viewing three dimensional (3D) building models, project scheduling and construction problem solving features.
2 Units
40 Lecture hours

CARP 060W
Building Information Modeling Computer Applications
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the mill and cabinet maker industry by providing instruction for computerized software used to develop three dimensional models.
of construction projects. Training will provide an introduction to the design process using various drawing software. Students will practice importing and exporting design elements into building information modeling (BIM) organization structure for project management and work flow assessment. The course will include a review of basic computer skills.

2 Units
40 Lecture hours

CARP 070A
Basic Frame Scaffold
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the basic techniques and procedures to erect frame scaffolds. Construction practices and safety considerations will be a major focus of the class. Scaffold standards and regulations enforced industrywide are presented and utilized in hands-on projects. Students will identify frame scaffold components and the importance of site and equipment inspections. Students will erect typical frame scaffold assemblies to industry standards.

1.5 Units
20 Lecture hours
20 Lab hours

CARP 070B
Basic System Scaffold
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by providing the basic techniques and procedures used to erect system scaffolds. Construction practices and safety considerations will be a major focus of the class. Scaffold standards and regulations enforced industrywide are presented and utilized in hands-on projects. Students will erect typical system scaffold assemblies to industry standards.

1.5 Units
20 Lecture hours
20 Lab hours

CARP 070C
Basic Tube and Clamp Scaffold
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by introducing the skills required to erect elevated platforms that span a large area. The importance of verifying that the first bay is plumb, level and square will be stressed. The practices for attaching and aligning multi-bay scaffolds in both width and length directions will be explained. Students will access various methods of distributing platform loads. The students will employ proper procedures to elevate each row of bays to maintain a uniform and level platform. Students will use the techniques presented to erect multiple connected and non-connected scaffold bays to industry standards.

1.5 Units
20 Lecture hours
20 Lab hours

CARP 070F
Intermediate System Scaffold
Prerequisite: State Indentured Scaffold Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course will introduce the skills required to construct elevated platforms that span a large area. Students will use the techniques presented to erect multiple connected and non-connected scaffold bays.

1.5 Units
20 Lecture hours
20 Lab hours

CARP 070G
Advanced Frame Scaffold
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the carpentry industry by introducing the skills required to erect elevated platforms that span a large area. The importance of verifying that the first bay is plumb, level and square will be stressed. The practices for attaching and aligning multi-bay scaffolds in both width and length directions will be explained. Students will access various methods of distributing platform loads. The students will employ proper procedures to elevate each row of bays to maintain a uniform and level platform. Students will use the techniques presented to erect multiple connected and non-connected scaffold bays.

1.5 Units
20 Lecture hours
20 Lab hours
CARP 070H
Advanced System Scaffold
Prerequisite: State Indentured Scaffold Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course will provide the student with the ability to adapt the scaffold configuration to follow the contour of a building’s architectural features and height limitations. Students will erect a frame scaffold to conform to angles, slopes, obstacles and obstructions of a wall and/or ceiling.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 070I
Advanced Suspended Scaffold
Prerequisite: State Indentured Scaffold Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course will cover the advanced techniques and procedures required when constructing suspended scaffolds supported by structural members. Students will identify the suitable structural components for this application type. The methods used to determine load bearing capability of structural elements will be presented. The hazards and precautionary techniques associated with safely building this type of suspended platform will be the focus of this training.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 070J
Confined Space
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to provide the student with the ability to adapt the scaffold configuration to follow the contour of a building’s architectural features and height limitations. Students will erect a frame scaffold to conform to angles, slopes, obstacles and obstructions of a wall and/or ceiling.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 070K
Scaffold Reshoring
Prerequisite: State Indentured Scaffold Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course will cover the basic techniques and procedures associated with frame, system, and tube and clamp scaffold components used in industrial settings. The regulations, terminology and components used in these systems types will be discussed in depth. Construction practices and safety considerations will include plant operating processes, equipment, hazardous material awareness, and emergency response. Students will identify and erect equipment using basic configurations suitable for jobsites where industrial scaffolds are commonly used during maintenance cycles.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 070L
Specialty Scaffold Applications
Prerequisite: State Indentured Scaffold Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course will include specialty scaffold applications focusing on ramps, chutes and mobile towers suitable for light and heavy duty use. Students will identify the characteristics of commercial and industrial scaffold construction. The selected projects for this class will introduce the techniques and procedures used for access/egress, debris handling, and maintenance scaffolds.
1.5 Units
20 Lecture hours
20 Lab hours

CARP 080A
Basic Wood Flooring Installation
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course provides an introduction to wood flooring materials and installation techniques. Students will study the characteristics of various hard and soft wood species typically chosen for grade, durability, and color. The inspection of existing subfloors will be discussed, and procedures for installing new subfloors will be presented.
1.5 Units
20 Lecture hours
20 Lab hours

This course is designed to be compliant with applicable regulations, and provide workers with industry recognized general scaffold building credentials. A fundamental approach and careful explanation of scaffold built applications will include safety and terminology; elevated platform intended use; span and loading criteria; access and egress; stability, structural connections and inspections. Detailed project drawing review will provide practical experience in locating dimensions, determining layout and scaffold material requirements. An emphasis on erection/dismantling sequence will foster the development of job planning, preparation skills and applied math. The importance of a safety program including, site specific conditions, communication, and fall protection will be addressed during scaffold construction exercises.
1.5 Units
20 Lecture hours
20 Lab hours
will be included. The proper preparation and installation sequence of wood strips and plank flooring will be the main focus of the training.

1.5 Units
20 Lecture hours
20 Lab hours

Carpentry 208B - Borders
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course covers the fabrication and production skills used to create borders for wood flooring installations. Students will interpret floor plans to determine details for border designs and estimate materials. Instruction will include design considerations, geometric layout procedures, and techniques for maintaining border symmetry.

1.5 Units
20 Lecture hours
20 Lab hours

Carpentry 208C - Parquet Flooring
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course covers the methods and techniques for installing parquet flooring. Students will study the characteristics of various parquet flooring patterns. Students will evaluate the suitability of hard and soft woods for use in parquet flooring patterns. The inspection, patching, and leveling of existing subfloors will be discussed and practiced. The proper preparation and installation sequence of parquet wood flooring will be the main focus of the training.

1.5 Units
20 Lecture hours
20 Lab hours

Carpentry 208D - Advanced Patterns
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course covers the fabrication and installation skills used in the production of custom wood flooring design. Students will study examples of artistic wood floor elements including geometric patterns, color variations, and inclusion of materials other than wood. Students will create a design pattern for a custom wood floor medallion, and use the techniques and skills presented to complete the medallion project.

1.5 Units
20 Lecture hours
20 Lab hours

Carpentry 208E - Diagonal and Herringbone Patterns
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course covers the fabrication and installation skills used in the production of diagonal and herringbone flooring patterns. Students will interpret floor plans to create pattern assemblies and estimate materials. Instruction will include design considerations, geometric layout procedures, and techniques for maintaining pattern symmetry.

1.5 Units
20 Lecture hours
20 Lab hours

Carpentry 208F - Crew Lead Training
Prerequisite: State Indentured Carpenter Union Apprentice; CARP 040A; CARP 040B
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course covers the supervisory and crew leadership skills required for professional development in the wood flooring industry. Typical work processes, communication methods, customer service considerations, motivational concepts and problem solving techniques, that when employed, produce efficient and effective management of wood floor installation. Various project scenarios will be used to conduct classroom exercises.

2 Units
40 Lecture hours

Carpentry 290 - Work Experience in Carpenters Apprenticeship
Prerequisite: State Indentured Carpenter Apprenticeship
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
(*Students will receive credit for only one of the following courses: CHEM 110, CHEM 120; no credit if taken after CHEM 130)
This course provides students the opportunity to work in the Carpenters apprenticeship program for the purpose of developing specific skills to meet the goals and objectives of the Carpenters Joint Apprenticeship and Training Committee (J.A.T.C.). Students complete work experience hours at approved training sites. Students may take up to 16 units total across all Work Experience course offerings. Only one Work Experience course may be taken per semester.

1 - 4 Units
3 Lecture hours
75 - 225 Other hours

Chemistry Division of Mathematics, Sciences, and Engineering

Chemistry 110 - Chemistry for Allied Health Majors
Prerequisite: MATH 050 or MATH 050D or MATH 053 or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; Concurrent enrollment in MATH 070 or MATH 070D or MATH 073
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: CHEM 110, CHEM 120; no credit if taken after CHEM 130)
This course provides an introduction to the fundamental concepts of general, organic, and biological chemistry, and is especially appropriate for students intending to pursue a career in nursing and other health-related professions, including kinesiology and psychology. Emphasis is placed on the relationship between chemistry and the health/medical sciences. Weekly laboratory activities require students to empirically verify concepts presented in lectures. No previous background in chemistry is required or expected of students enrolling in this course.

5 Units
72 Lecture hours
54 Lab hours

Chemistry 120 - Introduction to Chemistry
Prerequisite: MATH 070 or MATH 070D or MATH 073 or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: CHEM 110, CHEM 120; no credit if taken after CHEM 130)
This one-semester course is designed for students intending to major in science or engineering. The course primarily prepares students for Chemistry 130; additionally, it fulfills the general education requirement in the physical sciences. This course introduces the fundamental prin-
picles of general chemistry, with emphasis on chemical nomenclature and quantitative problems in chemistry. The lecture presents classical and modern chemistry including atomic theory, periodic properties, chemical bonding, chemical reactions, stoichiometry, acids and bases, gas laws and solutions. The laboratory introduces the techniques of experimental chemistry with examples from all areas of chemistry.

5 Units
72 Lecture hours
54 Lab hours

CHEM 130 (C-ID CHEM 110, CHEM 120S)
General Chemistry I
Prerequisite: CHEM 120
Advisory: ENGL 101; READ 043 or appropriate placement; MATH 175 or appropriate placement
Transfers to: UC, CSU
CHEM 130 is the first semester of a two semester sequence designed for students intending to major in science and engineering. The lecture course covers classical/modern chemistry, with applications, in stoichiometry and classical atomic theory of chemistry, periodic properties, gas laws, modern quantum theory of atomic and molecular structure and periodic properties, thermochemistry, liquids and solids, and solution chemistry. The laboratory introduces experimental chemistry with examples from all areas of chemistry.

5 Units
54 Lecture hours
108 Lab hours

CHEM 140 (C-ID CHEM 120S)
General Chemistry II
Prerequisite: CHEM 130
Advisory: ENGL 101; READ 043 or appropriate placement; MATH 180 or appropriate placement
Transfers to: UC, CSU
CHEM 140 is a continuation of CHEM 130. Theory and techniques of elementary physical chemistry are stressed. Emphasis is placed on the dynamics of chemical change using thermodynamics and reaction kinetics as the major tools. A thorough treatment of equilibrium is given, with many examples of acid/base, buffer, solubility, and complex ions. Entropy and free energy, electrochemistry, coordination compounds and a brief introduction to organic chemistry and nuclear chemistry are presented. Various analytical techniques used in modern chemistry are introduced. Descriptive chemistry of representative metallic and nonmetallic elements is included. The laboratory introduces experimental chemistry with examples from areas of kinetics, equilibrium, acid/base and buffer preparation, differential titration, electrochemistry, and qualitative analysis. Modern instrumental methods are used in some exercises.

5 Units
54 Lecture hours
108 Lab hours

CHEM 230 (C-ID CHEM 150, CHEM 160S)
Organic Chemistry I
Prerequisite: CHEM 140
Transfers to: UC, CSU
This course, the first of a two-semester sequence, provides a rigorous introduction to the practical and theoretical aspects of organic chemistry. Several topics will be explored in depth, including molecular structure and hybridization, applications of acid/base theory to organic compounds, stereochemistry, alkanes, alkenes, alkynes, dienes, substitution and elimination reactions, and spectroscopic methods of analysis (e.g. IR, UV/VIS, NMR). Particular emphasis will be placed on thermodynamic and kinetic aspects of reactions and detailed examination of reaction mechanisms. Laboratory exercises are designed to provide students with a solid foundation in the essential techniques of organic chemistry, including the determination of melting points, thin-layer and column chromatography, extraction, distillation, and spectroscopic analysis of products. This course is appropriate for students majoring in chemistry, biological sciences, and chemical engineering, and satisfies the admissions requirements for medical, dental, veterinary, and other health-related graduate programs.

5 Units
54 Lecture hours
108 Lab hours

CHEM 231 (C-ID CHEM 160S)
Organic Chemistry II
Prerequisite: CHEM 230
Transfers to: UC, CSU
This course, the second of a two-semester sequence, provides a rigorous introduction to the practical and theoretical aspects of organic chemistry. The chemistry of aromatic and carbonyl-containing compounds will be emphasized throughout the course of the semester. Bioorganic compounds will be introduced. Particular emphasis will be placed on thermodynamic and kinetic aspects of reactions, the detailed examination of reaction mechanisms, and the design of multi-step syntheses. Laboratory exercises require students to use the techniques learned in the previous semester to carry out more complex reactions and multi-step synthesis. Additionally, students will investigate the techniques of organic qualitative analysis. This course is appropriate for students majoring in chemistry, biological sciences, and chemical engineering, and satisfies the admissions requirements for medical, dental, veterinary, and other health-related graduate programs.

5 Units
54 Lecture hours
108 Lab hours

CHEM 299
Directed Study: Chemistry
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units
54 to 162 Lab hours

CHICANO STUDIES
Division of Behavioral & Social Sciences

CHST 101
Introduction to Chicano Studies
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is an introductory course that examines the cultural, economic, educational and political issues as they impact the Chicana/o in the U.S. Topics include Chicana/o identity, ethnic/racial paradigms, gender, language, race, educational attainment, immigration, labor, and poverty. Stu-
CHST 146  
The Mexican American in the History of the U.S.  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course is a survey of the history of the Mexican/Mexican-American people in the United States presented in the context of U.S. history and government. The course begins with a discussion of the Mexican American War and the Treaty of Guadalupe Hidalgo, and goes on to examine the Mexican American struggle for full integration into U.S. society. Key topics include repatriation, unionism, Mexican American GIs on the Pacific and European war front, postwar struggles for economic and social justice, radicalism, and concludes with an examination into the dramatic growth of the Mexican/Mexican-American population in the U.S. Students interested in this course may include individuals with familial or personal connections to the Chicano (Mexican-American) community and/or those intending to work in environments with high concentrations of this population.  
3 Units  
54 Lecture hours  

CHST 150  
Chicano Politics (Same as POLS 150)  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course examines U.S. history and political issues relevant to the Chicano/Latino community, provides an overview of Chicano/Latino demographics in the U.S. examines Chicano/Latino political activism and the rise of Chicano/Latino political leadership. Students interested in this course may include individuals with familial or personal connections to the Chicano (Mexican-American) community and/or those intending to work in environments with high concentrations of this population.  
3 Units  
54 Lecture hours  

CD 103  
Parenting  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: CSU  
This course is designed for students who are interested in gaining information to understand and work effectively with parents and to understand the parent child relationships in their own lives. The course provides a framework for topics pertinent to current parenting concepts. The following topics will be explored and examined: understanding the parenting process from infancy to adulthood, parenting in diverse culture, various life styles and family structures, alternatives to biological parenting and understanding high risk families.  
3 Units  
54 Lecture hours  

CD 109  
Current Issues in Child Development  
Advisory: CD 106; CD 110  
A working knowledge of current issues in the field of Child Development, leadership and advocacy skills and professionalism will be the focus of this course. The course is meant for students who are interested in understanding the current issues and changes in the field of Child Development. This course meets State Of California Teacher Credentialing requirements for the Child Development Permit and Department of Social Services Classification Indicator DS3.  
1 Unit  
18 Lecture hours  

CD 102 (C-ID ECF 220)  
Nutrition, Health and Safety for Children  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC (credit limit*), CSU  
*Students will receive credit for only one of the following courser: CD 106 or PSY 112)  
This course provides an overview of human growth from conception to adolescence. The theories of development relevant to life through the teenage years are introduced and the social, emotional, cognitive and physical aspects of these early stages of life are addressed. This course is appropriate for students preparing for a profession working with children and their families or those interested in furthering their program planning and development. Introduction will also be provided regarding the laws, regulations, standards, policies and procedures and child development curriculum related to child nutrition, health and safety. Topics will include prevention and recognition of infectious disease, immunization, dental and mental health, child nutrition, menu planning, sanitary food handling, prevention of injury, emergency preparedness and evacuation, providing services for children with special needs and child abuse prevention, identification and reporting responsibilities. The importance of program collaboration with families and health professionals will also be addressed. This course meets the Department of Social Services Classification Indicator DS7 and the State of California Department of Education Title 5 Child Development Permit.  
3 Units  
54 Lecture hours  

CHILD DEVELOPMENT  
Division of Behavioral & Social Sciences  

CHST 148  
La Chicana: The Contemporary Mexican-American Female (Same as SOC 148)  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC, CSU  
This introductory course explores the racial/ethnic identity formation of Chicanas/Mexican origin women in the United States. Course themes include an examination into the genesis of the term “Chicana”, the emergence of Chicana feminism, and the intersection of race, gender, class, and sexuality in relation to the formation and study of Chicana identities. This course is an interdisciplinary one, drawing on methodologies from racial/ethnic studies, women/gender studies, queer studies, history, literature, sociology, and popular culture. This course is appropriate for students interested in furthering their understanding of the social construction of the Mexican American woman.  
3 Units  
54 Lecture hours  

CD 106 (C-ID CDEV 100)  
Child Growth and Development  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC (credit limit*), CSU  
This course provides an overview of human growth from conception to adolescence. The theories of development relevant to life through the teenage years are introduced and the social, emotional, cognitive and physical aspects of these early stages of life are addressed. This course is appropriate for students preparing for a profession working with children and their families or those interested in furthering their
understanding of child and adolescent development. This course is also designed to meet the Department of Social Service Classification DS1 and applies toward the State of California Title 5 requirement for the Child Development Permit.
3 Units
54 Lecture hours

CD 110 (C-ID ECE 120) Principles and Practices of Early Childhood Education
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students desiring to work in educational programs for children from birth to age eight. The course is an examination of the underlying theoretical principles of developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationship, constructive adult-child interaction and teaching strategies in supporting physical, social, creative and intellectual development for all children. This course includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics and professional identity. This course meets the Department of Social Services Classification Indicator DS3 and applies toward the State of California Department of Education Title 5 Child Development Permit.
3 Units
54 Lecture hours

CD 111 (C-ID ECE 130) Early Childhood Education Curriculum
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This introductory course presents current concepts in childhood curriculum development and implementation. The student will design curriculum based on observation and assessment of young children to support play and learning using developmental, inclusive and anti-bias principles in collaboration with families to support all children; demonstrate knowledge of the teachers’ role in evaluating best practices and apply understanding of children’s learning and development. This course is meant for students who plan to create and implement children’s educational programs. This course is also designed to meet the State of California Title 22 Department of Social Service Classification Indicator DS3 and applies toward the State of California Title 5 requirements for the Child Development Permit.
3 Units
54 Lecture hours

CD 114 (C-ID ECE 200) Observation and Assessment
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students working towards a Child Development permit. The course focuses on appropriate use of assessment and observation strategies to document development, growth, play and learning in order to join with families and professionals in promoting children’s success and maintaining quality programs. Recording strategies, rating systems, portfolios, and multiple assessment methods are explored. Advantages and disadvantages of observation techniques, observer bias and cultural considerations are discussed. This course meets the Department of Social Services Classification Indicator DS 3 and applies toward the State of California Title 5 requirement for the Child Development Permit.
3 Units
54 Lecture hours

CD 115 Creative Art Experiences for Children
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides a comprehensive study of creativity and its impact on child development. A developmental perspective will be utilized as students explore creative art and its impact on the whole child, the artistic development process, aesthetics, the elements of art, specific art program approaches, artistic styles, facilitating and supporting creative art experiences for children, art assessment techniques and specific art experiences. This course is appropriate for students interested in working with children in group care and educational programs. The course meets the Department of Social Services Classification Indicator DS3 and applies towards the State of California Department of Education Title 5 Child Development Permit.
3 Units
54 Lecture hours

CD 116 Development of Science and Math Experiences
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides a framework from which to explore the theories, philosophies, principles, and implementation of science and math experiences for children from birth to early adolescence. Emphasis is placed upon theoretical and developmental foundations with practical application in the form of developmentally appropriate activities for use in the school and the child care center. This course is targeted for students preparing for a career in teaching children. The course meets the Department of Social Services Classification Indicator DS3 and applies towards the State of California Department of Education Title 5 Child Development Permit.
3 Units
54 Lecture hours

CD 119 Music and Movement for Children
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course offers a framework for providing developmentally appropriate music and movement principles and experiences for children birth to early adolescence. The developmental characteristics of movement and music abilities will be outlined along with the basics of movement and music education. Students will participate in music and movement related activities. This course is designed for students interested in working with children in group care and educational programs. The course meets the Department of Social Services Classification Indicator DS3 and applies towards the State of California Department of Education Title 5 Child Development Permit.
3 Units
54 Lecture hours

CD 120 Experiences in Language Arts
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students who are interested in promoting and facilitating the language development of children. The course is a study of philosophies, principles and implementation of language arts experiences for children from birth to early adolescence. The theoretical basis of language development and systems of teaching literacy will be addressed. Literature, dramatics, flannel board stories, puppetry, and storytelling are incorporated into the course as strategies for language acquisition as well as literacy activities. The course meets the Department of Social Services Classification Indicator DS3 and
CD 208 (C-ID CDEV 110) Child, Family and Community
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is designed for students desiring to work with children in a group setting, as well as for parents and others who wish to further their understanding of how the socio-cultural environment affects the developing child. The course examines the historical and contemporary relationship of family, school and community on child development. The process of socialization and identity formation will be highlighted, showing the importance of respectful, reciprocal relationships that support and empower families. This course meets the Department of Social Services Classification Indicator DS2 and the State of California Department of Education Title 5 Child Development Permit.

3 Units
54 Lecture hours

CD 211 Infant and Toddler Development
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is a study of infants and toddlers from pre-conception to age three including physical, cognitive, language, social, and emotional growth and development. The focus of this course applies theoretical frameworks to interpret behavior and interactions between heredity and environment. It also emphasizes the role of family and relationships in development. This course meets the Department of Social Services Classification Indicator DS4 and applies to the State of California Department of Education Title 5 Child Development Permit.

3 Units
54 Lecture hours

CD 220 (C-ID CDEV 100) Early Childhood Childhood Development
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course addresses the similarities, variety and multiplicity found within programs and educational settings for young children, school age children and adolescents. Topics covered include: family values, culture, race, gender, social class, sexual preference, language and abilities. Focus will also be placed on developmental appropriateness in addressing diversity, parental perspectives and the effects of diversity on the domains of development. This course is designed for students wishing to work in children’s programs and educational settings. This course meets the Department of Social Services Classification Indicator DS3 and applies to the State of California Department of Education Title 5 Child Development Permit.

3 Units
54 Lecture hours

CD 224 (C-ID ECE 230) Diversity Issues During Early Childhood, School Age and Adolescence
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course addresses the similarities, variety and multiplicity found within programs and educational settings for young children, school age children and adolescents. Topics covered include: family values, culture, race, gender, social class, sexual preference, language and abilities. Focus will also be placed on developmental appropriateness in addressing diversity, parental perspectives and the effects of diversity on the domains of development. This course is designed for students wishing to work in children’s programs and educational settings. This course meets the Department of Social Services Classification Indicator DS3 and applies to the State of California Department of Education Title 5 Child Development Permit.

3 Units
54 Lecture hours

CD 226 Introduction to Children with Special Needs
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement

This course introduces the variations in development of children with special needs ages birth through eight and the resulting impact on families. It includes an overview of historical and societal influences, laws relating to children with special needs, and the identification and referral process. This course will prepare students who wish to work in children’s programs or educational environments to facilitate the learning and development of children with special needs. Applies toward the State of California Teacher Credentialing requirements for the Child Development Permit.

3 Units
54 Lecture hours

CD 229 Literacy Development for Children
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is appropriate for students interested in facilitating and supporting literacy development in children enrolled in group care and educational environments. Focus is on effective skills and techniques utilized by teachers and caregivers to enhance the development of Emergent Literacy skills throughout childhood. Students will develop knowledge of the sequence of Literacy and Language Development, Developmentally Appropriate
Practices in classroom environments and a Balanced Literacy Approach. Effective assessment, curriculum and techniques to promote skill development will also be introduced. This course is appropriate for students who are interested in working with children in group care and education programs. The course meets the Department of Social Services Classification Indicator DS3 and applies towards the State of California Department of Education Title 5 Child Development Permit.

3 Units
54 Lecture hours

CD 232
Curriculum and Strategies for Children with Special Needs
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course covers curriculum and intervention strategies for working with children with special needs in partnership with their families. It focuses on the use of observation and assessment in meeting the individualized needs of children in inclusive and natural environments. Topics included are the role of the teacher as a professional working with families, collaboration with interdisciplinary teams, and cultural competence. The course meets the Department of Social Services Classification Indicator DS3 and applies towards the State of California Department of Education Title 5 Child Development Permits.

3 Units
54 Lecture hours

CHINESE
Division of Communications & Languages

CHIN 101
Chinese I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course provides the student with an introduction to the Chinese language and culture. The course stresses oral and written proficiency through fundamental use of Chinese pronunciation and the Pinyin Spelling System. Students will also receive an introduction to Chinese characters. Various facets of Chinese history, culture, and civilization will also be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory focuses on vocabulary, grammar, and cultural practices. This course is intended for those interested in learning to speak Chinese as well as for those seeking a degree in the Chinese language.

4.5 Units
72 Lecture hours
27 Lab hours

CHIN 102
Chinese II
Prerequisite: Completion of CHIN 101, or completion of 2 years high school Chinese with a grade of “C” or better
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course is a continuation of the essentials of the Chinese Language. The course stresses oral and written proficiency through fundamental use of Chinese pronunciation and the Pinyin Spelling System. Students will continue to further their knowledge of Chinese characters. Various facets of Chinese history, culture and civilization will also be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory focuses on vocabulary, grammar and cultural practices. This course is intended for those interested in learning to speak Chinese as well as for those seeking a degree in the Chinese language.

4.5 Units
72 Lecture hours
27 Lab hours

CIVIL DESIGN
Division of Career & Technical Education

CIV 140
Civil Engineering Fundamentals
Advisory: ENGT 101 or two years high school drafting; ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU
This course is for all students interested in the career field of Civil Engineering. The course presents advanced applications to surveying and global positioning systems (GPS) and their applications in land surveying and project scheduling, wastewater treatment, structural design and detailing, site grading, project scheduling, wastewater management, and similar engineering tasks.

3 Units
36 Lecture hours
54 Lab hours

CIV 142
Introduction to Surveying and GPS
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 102
Transfers to: CSU
This course is for all students interested in the career field of Civil Design Drafting, Surveying/Mapping, and Civil Engineering. Introduction to Surveying and GPS will cover the principles and practices of land surveying which will include the measuring of distance, direction, elevation and position, topographic mapping, and use and care of surveying equipment. The fundamentals of global positioning systems (GPS) and their applications in land surveying will also be introduced. This course will also be beneficial for those in the construction industry who need to acquire property data.

4 Units
54 Lecture hours
54 Lab hours

CIV 143
Applications to Surveying and GPS
Prerequisite: CIV 142
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU
This course is for all students with a basic understanding of surveying who are interested in pursuing a career in the field of Land Surveying. This course presents advanced applications that will cover the theory and practice of plane surveying, including principles of position, horizontal and vertical curves, construction staking, alignments, field procedures, U.S. Public Land Survey System, Boundary Surveying, use and care of surveying equipment.

4 Units
54 Lecture hours
54 Lab hours

CIV 210
Concrete Technology & Testing
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050,
Civil Engineering Design and Modeling
CIV 245

Civil Engineering Drafting and Design
Pre requisite: CIV 140; ENGT 150 or ENGT 170
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This course is an introduction into the use of concrete as a common construction material. The course is intended for individuals who intend to pursue careers in construction and students who wish to progress into Construction Management as a Civil Engineering sub-discipline. The material includes focus on the components of concrete, physical properties, mix design, quality control, and placing & testing of concrete. The course includes classroom lectures and assignments, as well as lab projects with direct experience in working with and testing concrete.

2 Units
18 Lecture hours
54 Lab hours

CIV 290

Cooperative Work Experience/Internship for Civil Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is in civil engineering design/drafting related fields and have completed or enrolled in the appropriate coursework. Instructor approval is needed to remain in the class. “Contact the CWE office regarding re-enrollment procedures.”

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours;
3 Units/180 hours; 4 Units/240 hours

Student Paid Internship:
1 Unit/60 hours; 2 Units/150 hours;
3 Units/225 hours; 4 Units/300 hours.

1 to 4 Units
3 Lecture hours
60 to 300 hours

CIV 299

Directed Study in Civil Design Technology
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This course provides an opportunity for the student to expand their studies in Civil Design Technology beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.

1 to 3 Units
54 to 162 Lab hours

COMPUTER INFORMATION TECHNOLOGY
Division of Business

CIT 051

Keyboarding
(Formerly CIT 100A)
Advisory: READ 043 or appropriate placement

This course is designed to enable the student to master the alphanumerical keyboard on a microcomputer by touch and to gain a thorough knowledge of current keyboarding techniques. This course is recommended for all students to provide them with the skills necessary to use touch keyboarding to prepare reports and general course assignments.

1 Unit
9 Lecture hours
27 Lab hours

CIT 060

Windows Operating System
Advisory: CIT 051

This course is a comprehensive course of the Microsoft Windows operating system and its graphical user interface. The student will learn: Graphical User Interface/Mouse, My Computer, File Management with Explorer, Wordpad, Paint, and data sharing using the clipboard. The find program, object linking and embedding, printers and fonts will also be included. Networking capabilities of Windows will be used and disk maintenance tasks will be performed.

3 Units
45 Lecture hours
27 Lab hours

CIT 101 (C-ID BUS 140)

Introduction to Computer Information Technology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 051
Transfers to: UC, CSU

This course is an examination of information systems and their role in business. It will focus on information systems, database management systems, networking, e-commerce,
ethics and security, computer systems hardware and software components. It will apply these concepts and methods through hands-on projects developing computer-based solutions to business problems.

3 Units
45 Lecture hours

CIT 102
Introduction to Microsoft Office
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 001
Transfers to: CSU
This course is intended as an introduction for students wanting to learn the latest version of the integrated program suite of Microsoft Office Professional. The student will be provided with the basics of each of the programs in the suite - Word, Excel, Access, PowerPoint, and Outlook as well as their Internet integration. In addition, an introduction to fundamental computer concepts will be presented including hardware and software basics, file management, computer networks and communications.

3 Units
45 Lecture hours

CIT 103
Microsoft Word
Advisory: READ 043 or appropriate placement; CIT 101
Transfers to: CSU
This is a thorough introduction to the word processing application Microsoft® Word®. This course will provide instruction in the use of the latest version of word processing software for business applications. Students will learn the basic editing and formatting functions of the program. Document maintenance, formatting enhancements, and the creation and formatting of tables will also be presented. Additional topics include macros and styles, specialized tables, protected forms and shared documents. This course is intended for students desiring to complete the requirements for the Computer Information Technology Microcomputer Specialist Degree or professionals wanting to master Microsoft Word.

3 Units
45 Lecture hours

CIT 104
Introduction to Programming
Advisory: ENGL 030 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; CIT 101
Transfers to: CSU
This course is designed to develop the problem-solving abilities of the student who intends to continue in the computer field. Various techniques used will include hierarchy diagrams, data flow diagrams, flow-charting, data diagrams, and pseudo code. This course will also include information on Microsoft Visual Studio.NET’s integrated development environment (IDE).

3 Units
54 Lecture hours

CIT 110
Introduction to Cloud Computing with DevOps
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement.
Transfers to: CSU
This course is an examination of information systems as it relates to developer operations (DevOps), cloud computing, and their role in business. It will focus on information systems, security, database management systems, networking, operating systems, cloud computing, project management strategies, version control, and programming methodologies. It will apply these concepts and methods through hands-on projects developing computer-based solutions to business problems.

4 Units
63 Lecture hours

CIT 111
Microsoft Excel
Advisory: CIT 101; READ 043 or appropriate placement
Transfers to: CSU
This is a comprehensive spreadsheet application course which will provide instruction in the use of the latest version of spreadsheet software for business applications. Students will learn to create and format a workbook, work with formulas and functions, create charts, tables and PivotTables. Students will also learn advanced functions, and develop Excel applications. This course is intended for students desiring to complete the requirements for the Computer Information Technology Microcomputer Specialist Degree or professionals wanting comprehensive knowledge of Microsoft® Excel®.

3 Units
45 Lecture hours

CIT 112
Advanced C++ Programming
Prerequisite: CIT 101
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; CIT 111
Transfers to: UC, CSU
This course is intended for students desiring to complete the requirements for the Computer Information Technology Degree or professionals wanting comprehensive knowledge of Microsoft® Excel®. Advanced topics include: classes and data abstraction, opera-
CIT 127 (C-ID COMP 122)
Python Programming I
Prerequisite: CIT 111
Transfers to: UC, CSU
This course is an introduction to the discipline of computer science, with a focus on the design and implementation of algorithms to solve simple problems using Python. Topics include fundamental programming constructs, problem-solving strategies, debugging techniques, declaration models, and an overview of procedural and object-oriented programming languages. Students will learn to design, implement, test, and debug algorithms using pseudocode and Python.
3 Units
45 Lecture hours
27 Lab hours

CIT 128 (C-ID COMP 132)
Python Programming II
Prerequisite: CIT 127
Transfers to: UC, CSU
This is a software engineering course focused on the application of software engineering techniques for the design and development of large programs. Topics include object oriented programming, data abstraction, data structures and their associated algorithms, and recursion. Students will learn to design, implement, test, and debug programs using Python.
3 Units
45 Lecture hours
27 Lab hours

CIT 130
Windows Configuration
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180
Transfers to: UC, CSU
This course is designed for students preparing to take the Windows client operating system certification exam. Students will learn to install, upgrade and migrate from previous versions of Windows using system images and configure virtual hard disks. Students will also learn to configure hardware & applications, network connectivity, access to resources, mobile computing, backup and recovery, and monitoring and maintaining systems that run Windows.
3 Units
45 Lecture hours
27 Lab hours

CIT 131
Windows Server Active Directory
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 130
Transfers to: CSU
This course is designed for students preparing to take the Windows Server Active Directory Configuring certification exam. Students will learn to configure Domain Name System, Active Directory objects, maintaining the Active Directory environment, and configure Active Directory Certificate Services.
3 Units
45 Lecture hours
27 Lab hours

CIT 133
Windows Server Applications Infrastructure
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 130
Transfers to: CSU
This course is designed for students preparing to take the Windows Server Applications Infrastructure certification exam. Students will learn to configure Domain Name System, Active Directory objects, maintaining the Active Directory environment, and configure Active Directory Certificate Services.
3 Units
45 Lecture hours
27 Lab hours

CIT 135
Introduction to Java Programming
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; CIT 111
Transfers to: UC, CSU
This course is intended for students desiring to complete the requirements for the Computer Information Technology Degree or professionals wanting an introduction to Java Programming. This course will cover the fundamentals of software development using the most popular Open Source language – Java. Course topics include: program design, algorithms, writing and testing source code, arithmetic/logic expressions, control structures, objects and basic Java structures.
4 Units
63 Lecture hours
27 Lab hours

CIT 136
Advanced Java Programming
Prerequisite: CIT 135
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; CIT 111
Transfers to: UC, CSU
This course is intended for students desiring to complete the requirements for the Computer Information Technology Degree or professionals who want to continue developing their programming skills using Java. This course covers the basics of the software development and the advanced programming skills using the Java language. Topics include Java data syntax, data structure, applets, graphics, animation, inheritance, abstract windows toolkit, exception handling, file input and output, and multi-threading.
4 Units
63 Lecture hours
27 Lab hours

CIT 139
Linux I
Prerequisite: CIT 114 or CIT 101
Transfers to: CSU
This course provides a skills foundation for students pursuing a career as Linux system administrators. The course prepares students for the Red Hat System Administration I (RH124) certificate. Students must complete this course if they wish to pursue the Red Hat System Administration II (RH134) certificate.
3 Units
45 Lecture hours
27 Lab hours

CIT 140
Linux II
Prerequisite: CIT 139
Transfers to: CSU
This course prepares students for the Red Hat System Administration II (RH134) certificate. RH134 focuses on the key tasks needed to become a full time Linux administrator.
3 Units
45 Lecture hours
27 Lab hours

CIT 152
Introduction to Web Page Design for Business
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; CIT 101
Transfers to: CSU
This course provides students with an understanding of the fundamentals of HTML (Hypertext Markup Language) programming to design Web pages. Students will create custom Web pages for personal Internet and business Internet environments. Students will also learn to
use cascading style sheets (CSS) and scripting languages.

3 Units
45 Lecture hours
27 Lab hours

CIT 155
Introduction to E-Commerce
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement; CIT 101
Transfers to: CSU
This course offers a hands-on problem-solving approach for learning the basic to more advanced features of doing business on the Internet. You will learn how to use E-commerce effectively, such as: gather corporate information, make a purchase online, develop an effective company Web site; or find global trading partners. You will learn how and why electronic commerce is an important part of our economy and our society.
3 Units
54 Lecture hours

CIT 160
Introduction to Operating Systems
Advisory: CIT 060
Transfers to: CSU
This course provides an overview of the operating systems that are currently used to create an e-business infrastructure. Operating systems discussed include Windows, Unix, Linux, Novell and Mac and their use in the industry. An in-depth study of Windows 2000 Server is also presented. Topics discussed are how to setup, install, and administer Windows 2000 Servers. This course is designed for students interested in learning operating systems and the use of operating systems in running corporate information systems.
3 Units
36 Lecture hours
54 Lab hours

CIT 170
Server +
Prerequisite: CIT 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course will provide a student with the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The student will be able to identify environmental issues; understand and comply with disaster recovery and physical/software security procedures; become familiar with industry terminology and concepts; understand server roles/specializations and interaction within the overall computing environment. This course also prepares students for the current version of CompTIA’s Server+ certification exam.
3 Units
45 Lecture hours
27 Lab hours

CIT 171
Network +
Prerequisite: CIT 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP (Internet Protocol) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for further study of computer networks. It uses the OSI (Open Systems Interconnection) and TCP (Transmission Control Protocol) layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. Preparation for the CompTIA Network+ certification exam.
3 Units
45 Lecture hours
27 Lab hours

CIT 172
Database Essentials in Amazon Web Services
Prerequisite: CIT 101 or CIT 114
Transfers to: CSU
This course provides the students with an introduction to the core concepts in data and information management in traditional and cloud systems. It is centered around the core skills of identifying organizational information requirements, modeling them using conceptual data modeling techniques, converting the conceptual data models into relational data models and verifying its structural characteristics with normalization techniques, and implementing and utilizing a relational database using an industrial-strength database managements system in Amazon Web Services. The course will also include coverage of basic database administration tasks and key concepts of data quality and data security. In addition to developing database applications, the course helps the students understand how large-scale packaged systems are highly dependent on the use of Database Management Systems (DBMSs). Building on the transactional database understanding, the course provides an introduction to data and information management technologies that provide decision support capabilities under the broad business intelligence umbrella.
3 Units
45 Lecture hours
27 Lab hours

CIT 173
Compute Engines in Amazon Web Services
Prerequisite: CIT 114
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course addresses how cloud computing systems are built using a common set of core technologies, algorithms, and design principles centered around distributed systems. Students will use the Amazon Web Services (AWS) Management Console to provision, load-balance and scale their applications using the Elastic Compute Cloud (EC2) and the AWS Elastic Beanstalk. The course discusses, from a developer perspective, the most important reasons for using AWS and examines the underlying design principles of scalable cloud applications.
1.5 Units
22.5 Lecture hours
13.5 Lab hours

CIT 174
Security in Amazon Web Services
Prerequisite: CIT 114
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course focuses on protecting the confidentiality, integrity and availability of computing systems and data. Students learn how Amazon Web Service (AWS) uses redundant and layered controls, continuous validation and testing, and a substantial amount of automation to ensure the underlying infrastructure is continuously monitored and protected. Students examine the AWS Shared Responsibility Model and access the AWS Management Console to learn more about security tools and features provided by the AWS platform.
1.5 Units
22.5 Lecture hours
13.5 Lab hours

CIT 175
DevOps Engineering in Amazon Web Services
Prerequisite: CIT 173 and CIT 174
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
In this course, students explore how development processes can be automated and integrated with
operations so changes to software can be deployed to cloud computing environments according to DevOps (developer and operations) best practices. Students will use Amazon Web Services (AWS) products to provision infrastructure then deploy code using a managed pipeline. Operations topics include initializing infrastructure as code, applying security, monitoring service health, and troubleshooting. Development topics include secure deployment practices with continuous integration and continuous delivery as it relates to the software development life cycle. Students will build their skills by participating in in-class interactive lectures, hands-on lab activities, and working on comprehensive assignments.

3 Units
54 Lecture hours
27 Lab hours

CIT 180 (C-ID ITIS 110)  PC Maintenance-A+ Certification
Prerequisite: CIT 101
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is intended for IT students and professionals, or purchased commercial-off-the-shelf packages.

3 Units
54 Lecture hours
54 Lab hours

CIT 190  Introduction to Information Security
Prerequisite: CIT 101
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course provides an introduction to the various technical and administrative aspects of information security. The student will gain an understanding of the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. This course is intended for IT students and professionals who want to develop a foundation in information security systems.

3 Units
54 Lecture hours

CIT 192  Security+
Prerequisite: CIT 101; CIT 210
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180
Transfers to: CSU
This course provides an introduction to the fundamental principles and topics of information technology security and risk management at the organizational level. It addresses hardware, software, processes, communications, applications, and policies and procedures with respect to organizational cybersecurity and risk management. This course provides preparation for the CompTIA Security+ certification exam.

3 Units
45 Lecture hours
27 Lab hours

CIT 200  Systems Analysis and Design
Prerequisite: CIT 101 or CIT 114
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
The course presents a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, articulating business requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the business requirements, and specifying the requirements for the information systems solution in particular, in-house development, development from third-party providers, or purchased commercial-off-the-shelf packages.

3 Units
54 Lecture hours

CIT 210 (C-ID ITIS 150)  Cisco Networking I
Prerequisite: CIT 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180
Transfers to: CSU
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP (Internet Protocol) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for further study of computer networks. It uses the OSI (Open Systems Interconnection) and TCP (Transmission Control Protocol) layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. This course is also the first of two courses designed to prepare students for the ICND 1 examination to achieve CCENT (Cisco® Certified Entry Networking Technician) certification and helps in preparation for the CompTIA Network+ certification exam.

3 Units
45 Lecture hours
27 Lab hours

CIT 211  Cisco Networking II
Prerequisite: CIT 210
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180
Transfers to: CSU
This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with IPv4, IPv6, single-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. This course is the second of two courses designed to prepare students for the ICND 2 examination to achieve CCENT (Cisco® Certified Entry Networking Technician) certification.

3 Units
45 Lecture hours
27 Lab hours

CIT 212  Cisco Networking III
Prerequisite: CIT 211
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180
Transfers to: CSU
This course is the first of two courses designed to prepare students for the ICND 2 examination to achieve CCNA (Cisco® Certified Network Administrator) certification. Students will learn the architecture, components and operations of routers and switches in a large and complex network. Students will also learn to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks along with developing skills needed to implement DHCP and DNS operations in a network.

3 Units
45 Lecture hours
27 Lab hours
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisite(s)</th>
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<tbody>
<tr>
<td>CIT 213</td>
<td>Cisco Networking IV</td>
<td>Prerequisite: CIT 212; Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180</td>
</tr>
<tr>
<td>CIT 221</td>
<td>Ethical Hacking</td>
<td>Prerequisite: CIT 171 or CIT 210 and CIT 192; Transfers to: CSU</td>
</tr>
<tr>
<td>CIT 290</td>
<td>Cooperative Work Experience/Internship for Computer Technology Related Fields</td>
<td>Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CIT 180</td>
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**COOPERATIVE WORK EXPERIENCE-GENERAL**

<table>
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<tr>
<th>Division of Career &amp; Technical Education</th>
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<tbody>
<tr>
<td>CWEG 290</td>
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<tr>
<td>Cooperative Work Experience Education - General</td>
</tr>
<tr>
<td>Transfers to: CSU</td>
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</tbody>
</table>

This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of Business Management and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”

### Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours

### Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.

### Computer Science

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisite(s)</th>
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<tbody>
<tr>
<td>CS 142</td>
<td>(C-ID COMP 142) Computer Architecture and Organization</td>
<td>Prerequisite: CIT 127; Transfers to: CSU</td>
</tr>
<tr>
<td>CS 152</td>
<td>Discrete Structures</td>
<td>Prerequisite: CIT 127; Transfers to: CSU</td>
</tr>
</tbody>
</table>

This course introduces the network security specialist to the various methodologies for attacking a network. Students will be introduced to the concepts, principles, and techniques, supplemented by hands-on exercises, for attacking and disabling a network within the context of properly securing a network. The course will emphasize network attack methodologies with the emphasis on student use of network attack techniques and tools and appropriate defenses and countermeasures. Students will receive course content information through a variety of methods: lecture and demonstration of hacking tools will be used in addition to a virtual environment. Students will experience a hands-on practical approach to penetration testing measures and ethical hacking.

### Division of Public Safety

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisite(s)</th>
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<tbody>
<tr>
<td>CORR 101</td>
<td>Introduction to Corrections</td>
<td>Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; Transfers to: CSU</td>
</tr>
</tbody>
</table>

This course is designed to provide Corrections or other interested students with an overview of the history and trends of adult and juvenile corrections. It will focus on probation, parole, legal issues, specific laws and the general operation of correctional institutions. The relationship between corrections and other components of the justice system will also be examined. This course has been identified by the Correctional Peace Officer Standards and Training Board of the Peace Officers Association to fulfill educational requirements of the CPOST Certificate for newly hired officers after July 1, 1995 by CDC and CYA.

### General Education

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisite(s)</th>
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<tbody>
<tr>
<td>CORR 104</td>
<td>Control and Supervision in Corrections</td>
<td>Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CORR 101; Transfers to: CSU</td>
</tr>
</tbody>
</table>

This course is designed to provide Corrections or other interested students with an overview of supervision of inmates in the local, state and federal correctional institutions. The issues of control in a continuum form of institutional daily living through crisis situations will be introduced and discussed. The course will emphasize the role played by the offender and the correctional worker. Topics include inmate subculture,
Introduction to Interviewing and Counseling

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; CORR 101

This course is designed to provide students with an overview of the techniques available to entry level practitioners in counseling and interviewing. While it is an introduction to approaches of behavior modification through interviewing and counseling, some of the advanced methods utilized by professional counselors such as game concepts, transactional analysis, sensitivity and confrontation methods will also be examined. The development of positive relationships between the client and support personnel will be stressed.

3 Units
54 Lecture hours

Leadership in Corrections

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is designed to provide Corrections or other interested students with an overview of the skills necessary to be an effective leader in a correctional setting. Topics addressed include the unique challenges faced by executives managing in prison settings, approaches to ensuring the creation and maintenance of a safe prison environment, and techniques for personnel development.

3 Units
54 Lecture hours

Case Load Management

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is designed to provide Corrections or other interested students with an introduction to effective caseload management in a correctional setting. Topics include the laws, policies, and bargaining units that govern caseload management. Specialized supervision issues such as offenders with psychological problems and second strike offenders will also be addressed.

3 Units
54 Lecture hours

Supervision in Public Safety

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is designed to provide Corrections or other interested students with an in-depth understanding of public safety communication in the correctional field. Topics include techniques of effectively communicating facts of information and ideas in a clear and logical manner for public safety reports. Students will gain practical experience in interviewing, note taking, report writing, and testifying.

3 Units
54 Lecture hours
COUN 100
Introduction to College Survival (Formerly COUNS 099)
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This course is intended for special populations and programs such as student athletes and the Summer Scholars Transfer Institute. This course will help students develop knowledge and skills to successfully move through the community college system and transition and acculturate into a four-year institution. Students will learn and apply information in the following areas: higher education terminology, community college transfer requirements, as well as skills necessary for completing a bachelor’s degree or higher. Students will also learn about academic, social and cultural integration for retention in higher education through knowledge of college requirements, policies and procedures, campus support services, and self-management.
1.5 Units
27 Lecture hours

COUN 101 (same as EDEV 101)
College and Life Success
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 3 units credit for all COUN courses)
This course provides an exploration of cognitive, psychological, social, and physical factors influencing success in college and in life. Topics include personal responsibility, critical thinking, motivation, self-efficacy, personal awareness, life-long learning, self-management, health and wellness, interpersonal communication in a diverse world, and introduction to career and educational planning. Students will learn about the purpose, demands, requirements, and support services of higher education including both Rio Hondo College and four year institutions.
1.5 Units
27 Lecture hours

COUN 101B
College and Life Success
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 3 units credit for all COUN courses)
This course provides an exploration of cognitive, psychological, social, and physical factors influencing success in college and in life. Topics include personal responsibility, critical thinking, motivation, self-efficacy, personal awareness, life-long learning, self-management, health and wellness, interpersonal communication in a diverse world, and introduction to career and educational planning. Students will learn about the purpose, demands, requirements, and support services of higher education including both Rio Hondo College and four year institutions.
1.5 Units
27 Lecture hours

COUN 102
Introduction to the Transfer Process
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to develop and enhance decision-making strategies for students interested in transferring. Students will develop critical thinking skills by identifying, comparing, and analyzing the differences in university entrance and major requirements as related to their educational and career goals. Students will examine the requirements of the universities and complete a comprehensive educational plan. On-site research/field study at universities required.
2 Units
36 Lecture hours

COUN 103
Introduction to Student Leadership Development
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 3 units credit for all COUN courses)
This course will focus on building a student’s leadership potential. It will examine foundational leadership theories and application in student government and organizations. Students will develop their own personal leadership philosophy that includes an understanding of self, others, and community. Some topics to be covered include: leadership theories, characteristics and competencies, ethics, diversity in leadership, decision-making, program development, parliamentary procedure, and team building.
3 Units
54 Lecture hours

COUN 104
Stress and Anxiety Management for Emotional Well-Being
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course is designed to increase a student’s awareness of the effects of stress and anxiety on academic performance and daily life. Topics include the impact of stress on behavioral, cognitive, physical, and social-emotional well-being. Emphasis will be placed on understanding effective and ineffective responses to stress and anxiety, as well as on planning a personal stress and anxiety management program. Students will explore and develop a variety of practical coping skills and management techniques.
3 Units
54 Lecture hours

COUN 105
Orientation and Education Planning
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This course is designed for first-time college students as well as students who have not yet developed an individual education plan. Students will be oriented to Rio Hondo College policies and procedures, learn about certificate/degree options within the higher education system, and the graduation/transfer requirements within these systems. The course will culminate in the development of an individual education plan based on each student’s specific academic goal. This course is offered on a pass/no pass basis.
0.5 Units
9 Lecture hours

COUN 101A
College and Life Success
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 3 units credit for all COUN courses)
This course provides an exploration of cognitive, psychological, social, and physical factors influencing success in college and in life. Topics include personal responsibility, critical thinking, motivation, self-efficacy, personal awareness, life-long learning, self-management, health and wellness, interpersonal communication in a diverse world, and introduction to career and educational planning. Students will learn about the purpose, demands, requirements, and support services of higher education including both Rio Hondo College and four year institutions.
3 Units
54 Lecture hours
COUN 151 
Career Exploration and Life Planning
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 3 units credit for all COUN courses)
This course will examine student, career and self-development theories to empower students to make effective decisions throughout their lifespan by engaging in the process of career and life planning from a psychological, sociological and physiological perspective. Students will compare and contrast human development and career theories, decision-making, factors that contribute to college success, life skills, adult workplace competencies, values, interest, abilities, and personal-ity, labor market trends in a global economy, and successful job search and workplace behaviors.
3 Units
54 Lecture hours

COUN 290 
Cooperative Work Experience/Internship for Student Services Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in the Student Services field under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in the area of Student Services and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of Student Services and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours;
3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours;
3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 hours

COUN 299 
Directed Study in Counseling
Transfers to: CSU
The course provides an opportunity for the student to expand their studies in Counseling beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

DANCE

Division of Kinesiology, Dance, and Athletics

Dance Activity Courses
Dance activity courses may be used in place of Kinesiology (formerly P.E.) activity courses to fulfill degree requirements.

DANC 114 
Conditioning and Alignment for the Dancer
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed to provide the physical training and preparation for students interested in Dance, Yoga, and/or Pilates and is suitable for individuals seeking to move with greater efficiency and less pain in everyday activities. Students will learn how to move the body in a safe and effective manner and develop strength, flexibility, proper alignment, agility, balance and coordination. Coursework is designed for those wishing to work at a more deliberate pace and in a non-competitive atmosphere, or who are recovering from prior injury.
1 Unit
54 Lab hours

DANC 150 
Introduction to World Dance
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Introduction to World Dance offers dance and non-dance students an opportunity to study cultural diversity through the activity of dance. Students learn how to analyze and perform basic movement patterns as they compare and contrast the social conventions, religious traditions, and historic contexts represented in a collection of multi-cultural dance forms.
1 Unit
54 Lab hours
This course may be repeated three times for credit.

1 Unit
54 Lab hours

DANC 154
Jazz Dance I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Highly visible on stage and screen, Jazz Dance is an eclectic and versatile contemporary art form with deep roots in African American dance. Jazz Dance I is designed to introduce the beginning student to the fundamental polyrhythms, physical skills, terminology, and historical context that form the basis of Jazz technique. A variety of Jazz dance styles will be introduced, and may include tap, musical theater, contemporary lyrical, Latin, Cuban, Afro-Caribbean, pop, funk, hip-hop, Lindy Hop, and other African-American social dances that form the basis of this dance genre in the United States. Students may take any combination of four Jazz courses total.

1 Unit
54 Lab hours

DANC 157
Hip-Hop Dance
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Students will learn various forms of beginning hip-hop dance, including hip-hop funk, emphasizing body isolations, syncopations, and rhythms. The class will explore the use of space, energy, rhythm, movement dynamics, and improvisation while emphasizing body control, alignment, balance, and use of weight changes. A basic history of hip-hop culture and music will be discussed. The course fulfills an elective for the AA in Dance and appeals to dancers seeking careers in dance, students looking to expand their dance skills, and those wanting a dance aerobic workout.

1 Unit
54 Lab hours

DANC 159
Choreography I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; DANC 151
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Choreography I is an introduction to the art and craft of dance composition. Through lecture and activity, students will learn how to incorporate the elements of dance: body, space, time, and energy, in order to create meaningful dance works. Basic elements of choreography, including form, design, motivation, phrasing, gesture, rhythm, dynamics, musical accompaniment, and production basics, will be explored through improvisational exercises and experimentation. Additionally, students will learn to analyze dance critically. The class will culminate in the presentation of student choreography.

3 Units
36 Lecture hours
54 Lab hours

DANC 162
Dance Production
Corequisite: DANC 180
Advisory: ENGL 030 or ENLA 100 or appropriate placement; READ 022 or appropriate placement; DANC 151; DANC 159; DANC 251
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course offers an introduction to the technical aspects of dance production and is designed for the beginner level dance student. Topics of exploration include basic staging, costume design, set design, make-up, lighting, sound production, and publicity. Productions will be presented for public performance either on and/or off campus.

3 Units
18 Lecture hours
108 Lab hours

DANC 167
Latin Dance for Fitness
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; DANC 162 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Latin Dance for Fitness combines dance, Latin and Funk rhythms, and aerobic elements to provide a fun, upbeat, cardiovascular workout. Students will constantly move to various genres of Latin music, utilizing various tempos. Salsa, Cha-Cha, Mambo, Mambo, Samba, Rumba, Merengue, Bachata and Bolero. This course emphasizes the use of proper lead and follow techniques as a form of communication between partners, and develops proper alignment, balance, body awareness, and rhythmic coordination which are necessary parts of appropriate social dancing technique. A basic understanding of partner dancing etiquette will also be addressed. The course appeals to students interested in the social aspect of dance, ones seeking experience in partnering work, and dancers seeking careers in dance.

1 Unit
54 Lab hours

DANC 168
Latin Social Dance
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Students will learn various types of beginning club and American-style Latin dance forms that may include Salsa, Cha Cha, Samba, Rumba, Merengue, Bachata and Bolero. This course provides dance students the opportunity to rehearse and perform choreographic works based on existing dance repertoire created by well-known and established choreographers, faculty, and/or guest artists. Students will learn how to analyze movement using basic elements of Laban Movement Analysis in preparation for stage. They will also experience different methods of reconstructing existing repertoire and gain knowledge about the historical significance of the repertoire explored. Productions will be presented for public performance either on and/or off campus.

3 Units
18 Lecture hours
108 Lab hours

DANC 179
Dance History
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
DANC 182
Dance Ensemble
Corequisite: DANC 180
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement; DANC 151; DANC 159; DANC 162; DANC 251
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course provides an opportunity for dance students to develop and practice ensemble skills necessary to rehearse and produce a professional dance performance. Modes of collaboration, basic ensemble skills used in the field of dance, rehearsal techniques, and the process of rehearsing and producing collaboratively will be covered. Productions will be presented for public performance either on and/or off campus.
3 Units
54 Lecture hours

DANC 199
Dance Appreciation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This survey course is a multi-cultural exploration of one of the world’s oldest and most universal art forms. The history of ballet, jazz, modern, hip-hop, and musical theater dance are investigated through lecture, video and demonstration. In addition, dance will be analyzed in terms of Body, Effort, Space, and Shape and examined for cultural, social and political influences. This course is designed for students who want to gain an understanding of dance, for dance majors who want to broaden their knowledge.
3 Units
18 Lecture hours
108 Lab hours

DANC 251
Modern Dance II
Prerequisite: DANC 151
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Modern II is a studio course offering the intermediate modern dancer an opportunity to deepen and strengthen fundamental skills acquired in Modern I. While continuing to develop proper alignment and modern dance technique, the intermediate student will learn to perform combinations while shifting spatial orientation and integrating improvisation as required in auditions. Learning to create movement phrases, the Modern Dance II student will develop a sense of artistry and dynamic phrasing necessary for performing. Further understanding and identifying the underlying movement principles of modern dance, students will hone their technical skills in preparation for transfer or careers in dance. This course may be repeated three times for credit.
1 Unit
54 Lab hours
ECON 101 (C-ID ECON 202)  
Principles of Macroeconomics  
**Prerequisite:** MATH 050 or MATH 050D or appropriate placement  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC, CSU  
This is an introductory course in which students learn to describe and analyze the performance and policies of national economic systems, with an emphasis on the US economy. It is intended for Economics or Business majors as well as to satisfy General Education requirements. Topics include production possibilities and tradeoffs; comparative economic systems; functions of government; national income and employment; business cycles; money and banking; monetary and fiscal policy; comparative advantage and trade policy; economic growth and stability; and income distribution and poverty.  
3 Units  
54 Lecture hours  

ECON 101H (C-ID ECON 202H)  
Principles of Macroeconomics Honors  
**Prerequisite:** ENGL 101; MATH 070 or MATH 070D or MATH 073 or appropriate placement  
Advisory: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This is an introductory course in which students learn to describe and analyze the performance and policies of national economic systems, with an emphasis on the US economy. It is intended for Economics or Business majors as well as to satisfy General Education requirements. Topics include production possibilities and tradeoffs; comparative economic systems; functions of government; national income and employment; business cycles; money and banking; monetary and fiscal policy; comparative advantage and trade policy; economic growth and stability; and income distribution and poverty.  
3 Units  
54 Lecture hours  

ECON 102 (C-ID ECON 201)  
Principles of Microeconomics  
**Prerequisite:** MATH 050 or MATH 050D or MATH 053 or appropriate placement  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC, CSU  
This is an introductory course in economic analysis of markets, intended for Economics and Business majors as well as to satisfy General Education requirements. It may be taken prior to ECON 101. Students will learn how markets work to coordinate consumers and producers in an economy, various causes of the failure of free markets and policies used to correct or regulate market behavior.  
3 Units  
54 Lecture hours  

ECON 102H (C-ID ECON 201H)  
Principles of Microeconomics Honors  
**Prerequisite:** ENGL 101; MATH 070 or MATH 070D or MATH 073 or appropriate placement  
Advisory: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This is an introductory course in economic analysis of markets, intended for Economics and Business majors as well as to satisfy General Education requirements, and may be taken prior to ECON 101. Students will learn how markets work to coordinate consumers and producers in an economy, various causes of the failure of free markets and policies used to correct or regulate market behavior. Students will do a research project on an actual economic policy or a theoretical view.  
3 Units  
54 Lecture hours  

ECON 106  
Economics of Contemporary Issues  
**Prerequisite:** Eng 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC, CSU  
The course is an introductory course designed for students interested in exploring how the tools of economics are used to analyze and debate critical issues facing society today. Economics will be applied to issues such as: health care, trade deficits, social security, crime, pollution, alternative energy, income inequality, global development, housing and homelessness, and immigration.  
3 Units  
54 Lecture hours  

ED 090  
Tutoring Reading Skills to Adult Students  
**Prerequisite:** READ 043 with a grade of A or B  
**Prerequisite/Corequisite:** ED 090  
Advisory: ENGL 101  
Transfers to: CSU  
This course prepares students to tutor reading skills to adult learners at the community college. Tutors will
ED 110 (C-ID EDUC 200)
Introduction to Teaching
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed to introduce students to the profession of teaching through lecture and observation of K-12 classrooms and public schools. The major aspects of the teaching profession will be examined, the diversity of the public school system will be discussed, and students will gain experience in all three levels of the K-12 system. This course is intended for students considering a career in teaching. 45 hours of structured fieldwork is required.
3 Units
54 Lecture hours

ED 120
Tutoring Reading in the Elementary School
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This course provides preparation for a successful tutoring experience in reading at the elementary school level. Instruction will focus upon tutoring principles, stages of reading acquisition from pre-kindergarten through upper elementary school levels as well as materials, approaches, and activities that are appropriate for tutoring learners at these various stages of development. This course is designed for these students who intend to pursue a career in teaching at the elementary school level.
1 Unit
18 Lecture hours

ED 130
Tutoring Reading in the Schools: Seminar and Field Work
Prerequisite: READ 022 or appropriate placement
Prerequisite/Corequisite: ED 120
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course provides the student with supervised experience tutoring reading in an elementary-educational setting (grades K-6). Participants will apply their knowledge of the reading process and tutorial skills in tutoring sessions with children at an off campus site. A weekly class meeting provides the academic component to the tutoring experience, reinforcing and expanding the application of concepts gained in the prerequisite/corequisite course. This course partially fulfills the requirements for students participating in the Americorps grant program.
2 Units
18 Lecture hours
225 Lab hours

EDUCATIONAL DEVELOPMENT
Division of Disabled Students Program & Services

EDEV 020
Literacy Skills I
This is a beginning course for students with learning differences who have limited reading skills. Students practice learning strategies and techniques needed to encode, decode, and successfully integrate phonics and sight words to become better readers. This is a non-degree credit course and is offered on a pass/no pass basis.
3 Units
54 Lecture hours

EDEV 021
Literacy Skills II
Prerequisite: Appropriate skill level demonstrated through the RHC Placement Process
Corequisite: Concurrent enrollment in EDEV 021L.
This course is designed for students with learning disabilities who need to improve basic reading skills such as dictionary usage, vocabulary development, and reading comprehension. Students practice specific learning strategies needed to compensate for diverse learning styles or deficits. This is a non-degree applicable course and is offered on a pass/no pass basis. All students are required to concurrently enroll in the one-unit reading lab, EDEV 021L.
3 Units
54 Lecture hours

EDEV 021L
Literacy Skills II Lab
Prerequisite/Corequisite: EDEV 021
This course is a skills class designed for students with learning disabilities who need to improve reading comprehension and vocabulary through individually prescribed lab work. Students will complete reading tasks designed to complement the activities of their reading course. Students are required to be concurrently enrolled in EDEV 021, Literacy Skills II.
0.5 Unit
27 Lab hours

EDEV 022
Basic Arithmetic
This course is a review of the basic principles and skills of arithmetic. The general areas of review are operations of whole numbers and fractions, operations with decimals and proportional thinking, percent problems and applications to percents. This course is designed for students with special needs to master basic computational skills, develop problem solving and arithmetic skills, and acquire learning strategies to allow them to function successfully upon matriculating into upper level mathematics courses. This is a non-degree applicable course.
3 Units
54 Lecture hours

EDEV 024
Assessment for Learning Disabilities
Advisory: Appropriate placement through the Learning Disabilities Assessment Process
This course provides intensive diagnostic learning assessment for students with learning disabilities. A profile will be developed through cognitive and achievement assessment which will emphasize specific academic and learning modality strengths and weaknesses. Students will develop a Student Education Plan for future educational support. Recommended for all students who suspect they may have a learning disability. This is a non-degree credit course.
0.5 Unit
27 Lab hours

EDEV 025
Adaptive Computer Technology
This course helps disabled students to utilize adaptive computer hardware and software. Material will be provided which is relevant for each student’s needs. Emphasis will also be placed on knowledge of appropriate compensatory strategies and familiarity with disability equipment. Documentation of a verifiable disability needs to be provided to the DSP&S office to enroll in the course. This is a non-degree credit course.
1 Unit
54 Lab hours

EDEV 026
Consumer Math
This course is specifically designed for the Developmentally Delayed Learner (DDL) and students with special learning needs who would like to apply their math abilities to the workplace and everyday life. Home and money management; banking/obtaining credit; math skills
in the workplace; use of calculators; time cards/taxes and benefits; and basic reading, writing and math across the curriculum are emphasized in the course. Guest speakers will be invited and student projects will reflect the students’ conceptualization and ability to put into practice what is learned. This is a non-degree credit course.
3 Units
54 Lecture hours

EDEV 027
Strategies for Career Success
Prerequisite: Students must meet measured appropriate adaptive behaviors that meet California Community Colleges Title V regulations for DSP&S
Corequisite: EDEV 027L
Advisory: EDEV 020
This course is designed specifically for the Developmentally Delayed Learner (DDL) and students with special learning needs to prepare them for employment. Emphasis is on developing skills in the areas of goal setting, career assessment inventory, career awareness, career exploration, choosing a career, career preparation, socialization, utilizing community resources and appropriate grooming and hygiene. This is a non-degree credit course and is offered on a pass/no pass basis.
3 Units
54 Lecture hours

EDEV 027L
Strategies for Career Success Lab
Prerequisite/Corequisite: EDEV 027
Advisory: EDEV 020
This course is designed specifically for the Developmentally Delayed Learner (DDL) population and students with special learning needs. The laboratory is a work experience program with minimum supervision. Students are placed in on- and off-campus work sites for 4 hours per week. They will receive on-the-job training with close supervision at the various locations - 4 weeks at each job site. This is a non-degree credit course and is offered on a pass/no pass basis.
1 Unit
54 Lab hours

EDEV 029
Independent Living Skills
This course is designed specifically for the Developmentally Delayed Learner (DDL) population and students with special learning needs. Essential independent living skills are emphasized. Major topics focus on the how to live and work issues - from maintaining a healthy body and a safe home to finding and keeping a job. Desired outcome is for the student to develop the necessary skills to gain greater independence within- outside the family structure.
3 Units
54 Lecture hours

EDEV 030
English Skills
Corequisite: EDEV 030W
This course is designed for students with learning disabilities who need to improve basic writing skills. A process approach to writing is integrated with reading assignments to provide a variety of writing experiences. Students practice strategies to develop thinking, language, and writing skills. This course is the beginning level of composition; it prepares students for success in ENGL 035 or ENGL 101. This is a non-degree credit course and is offered on a pass/no pass basis. Students are required to concurrently enroll in EDEV 030W.
3 Units
54 Lecture hours

EDEV 030W
English Skills Workshop
Corequisite: EDEV 030
This course is a skills class to assist students with learning disabilities in improving writing and language skills through instruction with the Learning Disabilities Specialist. Students will perform writing tasks designed to complement the activities of their composition class. This is a non-degree applicable course and is offered on a pass/no pass basis. Students are required to concurrently enroll in EDEV 030, English Skills.
1 Unit
54 Lecture hours

EDEV 033A
Mathematical Foundations
Advisory: READ 022 or appropriate placement; ENGL 030 or EDEV 030 or ENLA 034 or appropriate placement
EDEV 033A is intended to mirror MATH 033A. It combines topics from both Basic Math and Pre-Algebra, including operations with whole numbers, integers, fractions, and decimals. This course serves as a foundational course for all students. Completion of EDEV 033A will enable the student to register for EDEV 033B or MATH 033B. Students must complete MATH 033A and MATH 033B within a maximum period of 24 months. The course is designed for students with special needs to master and develop problem solving and arithmetic skills and acquire learning strategies to allow them to function successfully upon matriculating into upper level mathematics courses. This is a non-degree applicable course.
3 Units
54 Lecture hours

EDEV 033B
Mathematical Foundations
Advisory: READ 022 or appropriate placement; ENGL 030 or EDEV 030 or ENLA 034 or appropriate placement
EDEV 033B is intended to mirror MATH 033B. This course combines topics from both Basic Math and Pre-Algebra, including rates, ratios, and proportional thinking, percent problems and applications to percent, and an introduction to algebraic thinking using fundamental principles of expressions and solving linear equations. This course serves as a foundational course for all students. Students must complete EDEV 033A and EDEV 033B within a maximum period of 24 months. The course is designed for students with special needs to master and develop problem solving and arithmetic skills and acquire learning strategies to allow them to function successfully upon matriculating into upper level mathematics courses. This is a non-degree applicable course.
2.5 Units
45 Lecture hours

EDEV 101
College and Life Success (Same as COUN 101)
Advisory: ENGL 030 or ENLA 034 or appropriate placement
Transfers to: CSU
This course provides an exploration of cognitive, psychological, social, and physical factors influencing success in college and in life. Topics include personal responsibility, critical thinking, motivation, self-efficacy, personal awareness, life-long learning, self-management, health and wellness, interpersonal communication in a diverse world, and introduction to career and educational planning. Students will learn about the purpose, demands, requirements, and support services of higher education including both Rio Hondo College and four year institutions.
3 Units
54 Lecture hours

EDEV 134
Study Techniques
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is a course in college study skills which also addresses the needs of students identified with special learning needs. Students are taught specific techniques, principles, and strategies which enable them to effectively acquire, integrate, store, and retrieve information and thus become more successful students. Topics in this course include in-depth instruction in critical reading and thinking,
Electrical Power Distribution Systems

This course explains how electricity is generated and delivered to customers. Course content includes safety, basic electrical theory of generation, transmission, transformers, regulators, fuses, meters, and applied mathematics to illustrate basic electricity relationships of components in an electrical power distribution system.

3 Units
54 Lecture hours

EDEV 151
Career Exploration and Life Planning
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course will examine student, career, and self-development theories to empower students to make effective decisions throughout their lives by engaging in the process of career and life planning from psychological, sociological, and physiological perspectives. Students will compare and contrast human development and career theories, decision-making, factors that contribute to college success, life skills, adult workplace competencies, labor market trends in a global economy, successful job search and workplace behaviors, and their own values, interest, abilities, and personality.

3 Units
54 Lecture hours

ELECTRONICS
Division of Career & Technical Education

ELEC 050
Introduction to the Electrical Industry
Advisory: READ 043 or appropriate placement
This introductory course is for a general audience and for those contemplating a career in the powerline (electrical) industry. Students will become acquainted with the basic concepts of terminology and will receive hands-on experience with components and measuring equipment.

2 Units
27 Lecture hours
27 Lab hours

ELEC 051
Electrical Power Distribution Systems
Prerequisite: ELEC 050
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This is an introductory course for linemen and those interested in a career in the power utility industry. This is the second class of a five class program designed to provide the student with knowledge and skills with electrical power distribution systems.

2 Units
27 Lecture hours
27 Lab hours

ELEC 052
Distribution of Electrical Power
Prerequisite: ELEC 051
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This is an introductory course for linemen and those interested in a career in the power utility industry. This is the third class of a five class program designed to provide the student with knowledge and skills with electrical power distribution systems. Course content includes safety, electrical theory of generation, transmission, distribution, substations, transformers, and applied mathematics related to the components of an electrical power distribution system.

3 Units
45 Lecture hours
27 Lab hours

ELEC 054
Fundamentals of Fiber Optics
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course presents the principles and practices of fiber optics and optoelectronic technology and includes instruction in the design, installation, and maintenance of fiber optic cabling control systems and optoelectronic control systems for computer communication and networking systems. This course is designed for students wanting to work in the Home Technology Service industry.

2 Units
27 Lecture hours
27 Lab hours

ELEC 055
Distribution of Electrical Power
Prerequisite: ELEC 050
This course explains how electricity is generated and delivered to customers. Course content includes safety, basic electrical theory of generation, transmission, transformers, regulators, fuses, meters, and applied mathematics to illustrate basic electricity relationships of components in an electrical power distribution system.

3 Units
45 Lecture hours
27 Lab hours

ELEC 056
Fundamentals of Wireless Communication
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course presents the principles and practices of wireless communication technology and includes instruction in the design, installation, and maintenance of wireless communication technology network systems. Emphasis is placed on system reliability, security, and cost containment concerns. This course is designed for students wanting to work in the Home Technology Service industry.

2 Units
27 Lecture hours
27 Lab hours

ELEC 057
Fundamentals of Wire and Cabling
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course will present the principles and practices of copper cable wiring technology and includes instruction in the design, installation, and maintenance of copper wiring systems for intelligent control systems, lighting and appliance control devices, communication, and networking. Also includes instruction in household and institutional power wiring. This course is designed for students wanting to work in the Home Technology Service industry.

2 Units
27 Lecture hours
27 Lab hours

ELEC 058
Fundamentals of Fiber Optics
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course presents the principles and practices of fiber optics and optoelectronic technology and includes instruction in the design, installation, and maintenance of fiber optic cabling control systems and optoelectronic control systems for computer communication and networking systems. This course is designed for students wanting to work in the Home Technology Service industry.

2 Units
27 Lecture hours
27 Lab hours

ELEC 060
Home Technology Integration Technologies
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course presents the principles and practices of installing and maintaining home technology. Students are exposed to home lighting controls, computer networking, home security, home entertainment systems including video, data, and voice, heating ventilation and air conditioning control systems, and home systems integration. This course prepares the student for Home Technology Industry certification and is designed for students wanting to work in the Home Technology Service industry.

4 Units
54 Lecture hours
54 Lab hours

ELEC 061
Fundamentals of Wire and Cabling
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course presents the principles and practices of copper cable wiring technology and includes instruction in the design, installation, and maintenance of copper wiring systems for intelligent control systems, lighting and appliance control devices, communication, and networking. Also includes instruction in household and institutional power wiring. This course is designed for students wanting to work in the Home Technology Service industry.

2 Units
27 Lecture hours
27 Lab hours

ELEC 062
Fundamentals of Fiber Optics
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course presents the principles and practices of fiber optics and optoelectronic technology and includes instruction in the design, installation, and maintenance of fiber optic cabling control systems and optoelectronic control systems for computer communication and networking systems. This course is designed for students wanting to work in the Home Technology Service industry.
ELEC 071
Mobile and Wireless Communications
Prerequisite: ELEC 070
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement

This is the second class of a five class program that will further examine the theory behind present day wireless (cellular) telecommunications systems. This course is designed to provide students with information and skills associated with the wireless (cellular) telecommunications industry. The course is intended for students that are interested in a new career or are currently working in the wireless telecommunications industry. Topics will include: wireless standards and protocols and the critical issues of compatibility, internetworking, and voice/data convergence, design and integration of WCDMA/UMTS, CDMA2000, and SC/DC into existing cellular/PCS networks. Also presented are topics on RF propagation, 3G and 4G networks, and the future of wireless telecommunications.

3 Units
45 Lecture hours
27 Lab hours

ELEC 090
D.C. and A.C. Fundamentals
Prerequisite: MATH 030 or MATH 030D or MATH 033 or appropriate placement, or TCED 080
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: CSU

This introductory course in D.C. and A.C. electricity is for general audience and for those contemplating a career in the electrical industry. Course content includes basic theory, resistance, capacitance, inductance, simple D.C. and A.C. circuits, transformers, measuring instruments, batteries, motors and generators.

3 Units
45 Lecture hours
27 Lab hours

ELEC 101
D/C Electronic Circuits and Devices
Prerequisite: MATH 030 or MATH 030D or MATH 033 or appropriate placement, or TCED 080
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: CSU

This course is an introduction to the field of Direct Current (D/C) electricity/electronics. Emphasis is on the theory of operation, physical properties and characteristics of DC electrical/electronic circuits and devices. Students will analyze circuits and solve problems utilizing basic network analysis methods. The course will instruct students on the arrangement of circuit diagrams, proper identification of circuit/device symbols, and use of wiring schematics. Laboratory work provides experience with the design and test of basic electrical circuits, use of meters, schematic diagrams, oscilloscopes, and common laboratory equipment. This course is for students that are contemplating a career in the electrical/electronics industry and is part of the preparation leading to an A.S. Degree or a Certificate in Electronics Technology.

4 Units
54 Lecture hours
54 Lab hours

ELEC 105
Computer Simulation and Fabrication of Electronic Circuits
Prerequisite: ELEC 101
Transfers to: CSU

This course provides an introduction to the use of computer software in the simulation and fabrication of electronic circuits and printed circuit boards. It is intended for students in electronics technology as well as those currently working in the electronics industry. Using a popular educational version of circuit simulation software, the Electronics Workbench TM program suite, students will be introduced first to concepts of analog and digital circuit simulation. The modeled circuits are then processed. Fabricated and ultimately tested as prototype circuit boards. Students will learn to use a miniature computer controlled circuit board mill to produce the prototypes.

2 Units
18 Lecture hours
54 Lab hours

ELEC 108
Introduction to Solid State Devices and Circuits
Prerequisite: ELEC 101 and 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: CSU

This course is an introduction to solid state devices used in the field of electronics. Emphasis is on the theory of operation, methods of fabrication, physical properties and characteristics of semiconductor devices and circuits. Devices considered are diodes, BJT and FET transistors, special diodes, Thyristors (SCR), IC's (digital and analog), typical applications of each device in amplifier, regulator, oscillator, timer and digital circuits. Students will analyze circuits and solve problems utilizing basic network analysis methods. Laboratory work provides experience with the design and test of basic solid state device circuits including signal tracing and troubleshooting, use of meters, schematic diagrams, oscilloscopes, and common laboratory equipment. This course is for students that are contemplating a career in the electrical/electronics industry and is part of the preparation leading to an A.S. Degree or a Certificate in Electronics Technology.

4 Units
54 Lecture hours
54 Lab hours

ELEC 109
Linear, Analog Circuits and Devices
Prerequisite: ELEC 101 and 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
ELEC 208
Advanced Solid State Devices and Circuits
Prerequisite: ELEC 108
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is a continuation of the study of solid state devices used in the field of electronics presented in the introductory course ELEC 108. Emphasis is on the theory of operation, physical properties and characteristics of advanced semiconductor devices and circuits. Devices considered are advanced design transistors, SCRs and other Integrated Circuits-IC's (digital and analog), typical applications of each device in inverters, converters, and switching power supplies. Students will analyze circuits and solve problems utilizing basic network analysis methods with emphasis on advanced biasing, cascading, coupling and phase shifting. Laboratory work provides experience with the design and test of advanced solid state device circuits including signal tracing and troubleshooting, use of meters, schematic diagrams, oscilloscopes, and common laboratory equipment. This course is for students that are contemplating a career in the electrical/electronics industry and is part of the preparation leading to an A. S. Degree or a Certificate in Electronics Technology.
4 Units
54 Lecture hours
54 Lab hours

ELEC 211
Introduction to Digital Electronics
Prerequisite: ELEC 101 and 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is an introduction to digital electronic principles common to all areas of electronics. The course will emphasize study of number systems and representations such as Binary codes, Hexadecimal codes and Boolean algebra. Analysis and design of combinational and sequential Logic Circuits, Gates, Adders, TTL: small and medium scale integrated devices, programmable logic and simulation of digital circuits and CMOS, ECL families will be covered. Laboratory work will also provide experience with the design and test of basic digital circuits, use of meters, schematic diagrams, oscilloscopes, and common laboratory equipment. This course is for students that are contemplating a career in the electrical/electronics industry and is part of the preparation leading to an A. S. Degree or a Certificate in Electronics Technology.
4 Units
54 Lecture hours
54 Lab hours

ELEC 211
Advanced Digital Electronics
Prerequisite: ELEC 111
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course is a continuation of introduction to electronic digital principles common to all areas of electronics. Building on the foundations covered in ELEC 111, emphasis will be placed on the study of various types of Counters, A/D and D/A Converters, I-O Devices, Memories and an introduction to Micro Computers. Through a variety of laboratory work, students learn applications by constructing various circuits and devices. Advanced analysis and design of combinational and sequential Logic Circuits, Gates, Adders, TTL: small and medium scale integrated devices, programmable logic and simulation of digital circuits and ECL families will be covered. Laboratory work will also provide experience with the design and test of basic digital circuits, use of meters, schematic diagrams, oscilloscopes, and common laboratory equipment. This course is for students that are contemplating a career in the electrical/electronics industry and is part of the preparation leading to an A. S. Degree or a Certificate in Electronics Technology.
4 Units
54 Lecture hours
54 Lab hours

ELEC 219
Directed Study in Electronics
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Electronics Technology beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours
EMERGENCY MEDICAL TECHNICIAN
Division of Public Safety

EMT 093
Emergency Medical Technician
Prerequisite: FTEC 121
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; BIOL 125
This course is designed to certify students as California State Emergency Medical Technicians and gain employment as an ambulance driver or ambulance attendant. After successful completion of this course, students will be authorized to take the National Registry EMT examinations and then request certification as an EMT through the Los Angeles County Department of Health or other local EMS accrediting agencies. Topics discussed include pre-hospital care terminology, cardiovascular emergencies, pre-hospital childbirth, communicable disease, extraction tools and equipment, automatic external defibrillation and an understanding of the Emergency Medical System. Students must pass a background check and EMT medical physical with a 10-panel drug screen.
8 Units
117 Lecture hours
81 Lab hours

EMT 0931
Emergency Vehicle Operations
Prerequisite: READ 043 or appropriate placement; Possession of a class “C” license.
Advisory: ENGL 035 or ENLA 100 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed for EMT students and other interested students to gain certification to obtain an Ambulance Driver Certificate in California. An Ambulance Driver Certificate can be obtained prior to completion of this course. Pre-trip inspection, driving skills and a driving test are parts of this course. Students will complete their certification through the California DMV. A physical may be required to meet California DMV requirements in regards to licensing.
4 Units
54 Lecture hours
54 Lab hours

EMT 290
Cooperative Work Experience/Internship for Emergency Medical Technician Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course supports and reinforces on-the-job training in the Emergency Medical Technician field under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in the area of Emergency Medical Technician and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of fire technology or EMS (emergency medical services) and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

ENGINEERING
Division of Mathematics, Sciences, and Engineering

ENGR 217 (C-ID ENGR 260L)
Electric Circuit Analysis Lab
Prerequisite: PHY 213, ENGR 217 and MATH 270
Corequisite: ENGR 217, MATH 270
Transfers to: UC, CSU
This course is a laboratory to accompany Electric Circuit Analysis. It covers simulation of circuits with software. The use of multimeters, oscilloscopes, power supplies, and function generators will be emphasized, as well as the simulation of circuits with software. DC, transient, and AC steady-state conditions are investigated.
1 Unit
54 Lab hours

ENGR 235
Engineering Mechanics: Statics
Prerequisite: PHY 211
Transfers to: UC, CSU
This course is for students who intend to pursue a major in engineering and provides an overview of the effect of two and three dimensional force systems on particles and rigid bodies under equilibrium conditions. Topics covered include distributed forces and determination of centroids, analysis of trusses, frames and machines, internal forces and moments, systems involving friction, and method of virtual work and equilibrium.
3 Units
54 Lecture hours

ENGR 245 (C-ID ENGR 230)
Engineering Mechanics: Dynamics
Prerequisite: ENGR 235
Transfers to: CSU
This course is for students who intend to pursue a major in engineering and provides an overview of the effect of two and three dimensional force systems on particles and rigid bodies in motion. Topics include kinematics of particles and rigid bodies; applications of Newton’s Second Law; energy and momentum methods in the study of motions; translational, rotational, & general planar motion; and mechanical vibrations.
3 Units
54 Lecture hours
ENGT 101
Introduction to Technical Drawing & Graphics
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This is a basic course in technical drawing and graphics for students with no previous drafting skills or training. The course is designed for students who wish to pursue training in fields and careers related to architecture, civil and engineering design drafting. Practical application will be provided with the tools, techniques, standards, and practices used in the industries that need technical drawings and graphics.
3 Units
36 Lecture hours
54 Lab hours

ENGT 105
Architectural and Technical Freehand Sketching
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to develop skill in freehand drawing as used by the design professionals in both architectural and technical applications. Using pen, pencil, marker, basic principles of proportion, composition and freehand techniques, students will prepare technical sketches to industry standards, in isometric, oblique, perspective and orthographic. Design considerations will also be introduced for various projects involving preliminary design sketches. This course is open to all students who wish to develop freehand drawing skills. It is required for all students working towards a degree or certificate in the Architecture and Engineering Design Drafting program.
2 Units
27 Lecture hours
27 Lab hours

ENGT 122
Engineering Design Graphics
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is an introduction to graphics as used in engineering design and the systematic use of graphic solutions and descriptive geometry to solve three dimensional engineering problems involving space, points, planes and lines. Technical drawing using I.S.O. and A.N.S.I. standards including geometric dimensioning and tolerancing, will be stressed with a conceptual design project and preparation of working drawings. This course is required for all students working towards a degree or certificate in the Architecture and Engineering Design Drafting program. The course is also recommended for students interested in transferring to Schools of Engineering.
4 Units
54 Lecture hours
54 Lab hours

ENGT 131
Engineering and Manufacturing Applications of Technical Drawing
Prerequisite: ENGT 122
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 150 or ENGT 170, or CADD experience
Transfers to: CSU
This intermediate course is the study of technical drawing as used in manufacturing applications of design and engineering technology. This course is for all students in areas of study related to Engineering, Technical Drafting, Design and Computer Graphics. The course incorporates orthographic projection, introduction to tool design, and applications of descriptive geometry through layouts and developments. The course will also cover ANSI Y14.5, precision dimensioning, geometric tolerancing, manufacturing terminology and processes. Lab exercises and drawings will be used to reinforce lecture and demonstration concepts.
4 Units
54 Lecture hours
54 Lab hours

ENGT 138
Engineering Careers & Applications
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is for all students interested in the career field of Engineering Design Drafting. Engineering Careers and Applications will explore the career opportunities and training requirements in the field of engineering and engineering technology. Topics will include the history of engineering, careers in engineering, ethics and responsibilities of the engineer, communicating and problem solving.
2 Units
27 Lecture hours
27 Lab hours

ENGT 150
AutoCAD for Basic CADD Applications
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 101 or two years of high school drafting
Transfers to: CSU
This course is for students preparing for high technology careers who need the skills necessary to function as an entry level CADD operator or to apply CADD to specific disciplines of mechanical and architectural design, manufacturing, illustration and engineering related documents. An overview of computer graphics and CADD (Computer Assisted Design and Drawing) utilizing the latest release of AutoCAD software will be provided. Students will produce 2D orthographic, isometric, and basic 3D model solutions of mechanical and architectural applications.
4 Units
54 Lecture hours
54 Lab hours

ENGT 170
MicroStation for Basic CADD Applications
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 101 or two years of high school drafting
Transfers to: CSU
This course is for students preparing for high technology careers who need the skills necessary to function as an entry level CADD operator or to apply CADD to specific disciplines of mechanical and architectural design, manufacturing, illustration and engineering related documents. An overview of computer graphics and CADD (Computer Assisted Design and Drawing) utilizing the latest release of MicroStation software will be provided. Students will produce 2D orthographic and basic 3D model solutions of mechanical and architectural applications.
4 Units
54 Lecture hours
54 Lab hours

ENGT 200
Intermediate AutoCAD for Design and Production
Prerequisite: ENGT 150
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 101 or two years of high school drafting
Transfers to: CSU
This course is for students pursuing degrees or certificates in the Architecture and Engineering Design Drafting Program and for those who wish to enhance their AutoCAD skills for workplace productivity. The course is an intermediate application study in computer aided design, drafting, and graphics using the latest revi-
ions of AutoCAD. Combined with previously learned technical drafting conventions and basic AutoCAD operational skills, students will use AutoCAD to produce detailed drawings that involve model-space and paperspace, 2D and 3D objects, block attributes and viewport scales. Emphasis will be placed on working with multiple drawing files using external files to create mechanical, architectural and civil projects.

3 Units
54 Lab hours

ENGT 231
Technical Product Design and Presentation
Prerequisite: ENGT 122; ENGT 150
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
 Transfers to: CSU
This intermediate course is the study of technical presentation drawing, product proposal and design including electro-mechanical packaging, orthographic and axonometric illustration for presentation and assembly pictorial views. Using computer aided design, manual drafting, and graphic techniques, students will apply previously learned skills to develop graphic illustrations of mechanical applications for use in catalogs, manuals and engineering support presentation documents. This course benefits all students in areas of study related to Engineering, Drafting, Design and Computer Graphics.
4 Units
54 Lecture hours
54 Lab hours

ENGT 250
Parametric Modeling 3D Applications for Mechanical Design
Prerequisite: ENGT 122 and ENGT 150
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
 Transfers to: CSU
This course presents advanced applications of 2D and 3D Computer Aided Design Drafting (CADD) and an introduction to parametric modeling and rapid prototyping utilizing the latest releases of AutoDesk Inventor series, SolidWorks, and other parametric modeling software to produce solutions for mechanical applications. This course benefits all students in areas of study related to Engineering, Drafting, Design and Computer Graphics, emphasizes CADD generated three dimensional graphics using wire frame, surface modeling, and parametric solids.
4 Units
54 Lecture hours
54 Lab hours

ENGT 265
Pressure Piping Design
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 150 or ENGT 170 or industry experience in CADD applications
 Transfers to: CSU
This course is for those students with CADD experience who are interested in the career field of pressure piping design engineering. This course presents the preparation of engineering detail drawings of piping systems for commercial, utilities and industrial plants. Included is information and work dealing with the location, installation, operation, and maintenance of pumps, steam turbines, compressors, tanks, heaters, coolers, cooling towers, condenser, reactor, boilers, chillers, heat exchangers and special equipment.
3 Units
36 Lecture hours
54 Lab hours

ENGT 266
Pressure Piping Applications
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 150 or ENGT 170 or industry experience in CADD applications; ENGT 265
 Transfers to: CSU
This course is for all students interested in the career field of pressure piping design engineering. This course presents the advanced preparation of engineering detail drawings of piping systems for commercial, utilities and industrial plants. Included is advanced information and layout work dealing with the location, installation, operation of pumps, steam turbines, compressors, vertical vessels, horizontal vessels, tanks, heaters, coolers, cooling towers, condenser, reactor, boilers, chillers, heat exchangers and special equipment.
3 Units
36 Lecture hours
54 Lab hours

ENGT 270
Solid Works for 3D Modeling and Prototype Applications
Prerequisite: ENGT 122; ENGT 150 or ENGT 170
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
 Transfers to: CSU
This course presents an intensive study in 3D computer graphics and CADD (Computer Assisted Design and Drafting) utilizing the latest release of SolidWorks Software. This course benefits all students in areas of study related to Engineering, Drafting, Design and Computer Graphics. Students will produce three dimensional parametric computer generated virtual models incorporating mechanical design refinements. The course emphasizes high technology skills which are necessary to function as a design professional to apply 3D design graphics technology to specific disciplines of mechanical engineering, machine drafting and design, manufacturing, animation, modeling and illustration. Students will be introduced to a variety of means to directly produce prototype models from CADD generated solid geometry.
4 Units
54 Lecture hours
54 Lab hours

ENGT 280
Advanced MicroStation for CADD & BIM Applications (Same as ARCH 260)
Prerequisite: ENGT 170, or verifiable work experience and proficiency in MicroStation XM or V6i
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 101 or two years of high school drafting
 Transfers to: CSU
This course is for students pursuing an advanced study in MicroStation 3D parametric CADD (Computer Assisted Design and Drafting) and the BIM (Building Information Modeling) approach to building design using Bentley Architecture. Students will apply previously learned drafting conventions to produce two and three dimensional CADD and BIM generated mechanical and architectural drawings and virtual design models. This course benefits all students studying Architecture, Civil, Engineering of all types, Drafting, Design and Computer Graphics. High technology skills which are necessary to function as a designer or CADD Drafter are emphasized.
4 Units
54 Lecture hours
54 Lab hours

ENGT 290
Cooperative Work Experience/Internship for Drafting Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
 Transfers to: CSU
This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended
English Composition Support
Corequisite: ENGL 101
Advisory: READ 022 or appropriate placement
This is a co-requisite support course for English 101 composition students which assists students who may benefit from additional support so that they can succeed in a college-level English composition course. Students will be afforded additional practice in all phases of composition, grammar, and mechanics.
1 Units
18 Lecture hours

ENGL 010SP
English Composition Support Plus
Corequisite: ENGL 101
Advisory: READ 022 or appropriate placement
This is a co-requisite support course for English 101 composition students which assists students who may benefit from additional support so that they can succeed in a college-level English composition course. Students will be afforded additional practice in all phases of composition, grammar, and mechanics.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

ENGT 299
Directed Study in Engineering Design Drafting
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Engineering Design Drafting beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

ENGL 020
College Writing Skills
This course is designed to provide students with the skills needed for writing in many college courses. The course covers the basics of college English skills, such as thesis statements, grammar, paper organization, and formatting. This course is intended to prepare students entering college who are planning to take any level of English or English as a new language (ENLA). This is a non-degree applicable course offered on a pass/no pass basis.
0.5 - Units
9 - Lecture hours

ENGL 030
Introductory Composition for Developing Writers
Corequisite: ENGL 030W
Advisory: READ 022 or appropriate placement
This course assists students in developing thinking, language, and writing skills through structured assignments that increase in complexity throughout the semester. This is the first or beginning course in composition; it prepares students for success in either ENGL 035 or ENGL 101. Students must concurrently enroll in the one-unit Writing Workshop, ENGL 030W. This is a non-degree applicable course and is offered on a pass/no pass basis.
3 Units
54 Lecture hours

ENGL 035
Introduction to College Composition
Prerequisite: ENGL 030 or ENLA 034 or appropriate placement
Corequisite: ENGL 035W
ENGL 035, a foundation-level composition course, prepares students to succeed in transfer-level English courses by developing and reinforcing essential college writing skills. Instruction on utilizing critical reading, thinking, and reasoning skills will be the focus of selected college-level readings. Through the use of engaging thematic units, students will practice effective written communication through a process-centered approach, including pre-writing, drafting, and multiple revisions of their work during the submission process. Throughout the semester, emphasis will be placed on active learning, skill development, as well as tools for college and life success. This is a non-degree credit course and is offered on a pass/no pass basis. In addition to ENGL 035, students will concurrently enroll in the ENGL 035W Writing Workshop where they will take part in workshop-specific assignments and additional individualized activities that complement and strengthen their work in ENGL 035. ENGL 035W Writing Workshop is required and offered on a pass/no pass basis.
3 Units
54 Lecture hours

ENGL 035W
Writing Workshop
Corequisite: ENGL 035
Advisory: READ 022 or appropriate placement
In this course, ENGL 035 students will participate in instruction that is designed to complement the Course Content from ENGL 035. Students will develop and improve their writing and language skills through individualized lessons and conferences with composition instructors. All ENGL 035 students must be concurrently enrolled in this course. This course is non-degree applicable, offered on a Pass/No Pass basis, and may be repeated one time for credit.
0.5 Units
27 Lab hours

ENGL 101 (C-ID ENGL 100)
College Composition and Research
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course may be repeated one time for credit. This is a non-degree applicable course offered on a pass-no pass basis.
0.5 Units
27 Lab hours

English Composition Support
Corequisite: ENGL 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement
This is a co-requisite support course for English 101 composition students which assists students who may benefit from supplemental support so that they can succeed in a college-level English composition course. Students will be afforded additional practice in all phases of composition, grammar, and mechanics.
1 Units
18 Lecture hours

ENGL 030W
Writing Workshop
Corequisite: ENGL 030
Advisory: READ 022 or appropriate placement
This is a lab course designed to assist students in developing and improving their writing and language skills through individual conferences with composition instructors. Students will complete and revise assignments that complement the goals and objectives of ENGL 030. All ENGL 030 students must enroll in this course. This course may be repeated one time for credit. This is a non-degree applicable course offered on a pass-no pass basis.
0.5 Units
27 Lab hours

ENGL 101 (C-ID ENGL 100)
College Composition and Research
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course may be repeated one time for credit. This is a non-degree applicable course offered on a pass-no pass basis.
0.5 Units
27 Lab hours

ENGL 035
Introduction to College Composition
Prerequisite: ENGL 030 or ENLA 034 or appropriate placement
Corequisite: ENGL 035W
ENGL 035, a foundation-level composition course, prepares students to succeed in transfer-level English courses by developing and reinforcing essential college writing skills. Instruction on utilizing critical reading, thinking, and reasoning skills will be the focus of selected college-level readings. Through the use of engaging thematic units, students will practice effective written communication through a process-centered approach, including pre-writing, drafting, and multiple revisions of their work during the submission process. Throughout the semester, emphasis will be placed on active learning, skill development, as well as tools for college and life success. This is a non-degree credit course and is offered on a pass/no pass basis. In addition to ENGL 035, students will concurrently enroll in the ENGL 035W Writing Workshop where they will take part in workshop-specific assignments and additional individualized activities that complement and strengthen their work in ENGL 035. ENGL 035W Writing Workshop is required and offered on a pass/no pass basis.
3 Units
54 Lecture hours

ENGL 035W
Writing Workshop
Corequisite: ENGL 035
Advisory: READ 022 or appropriate placement
In this course, ENGL 035 students will participate in instruction that is designed to complement the Course Content from ENGL 035. Students will develop and improve their writing and language skills through individualized lessons and conferences with composition instructors. All ENGL 035 students must be concurrently enrolled in this course. This course is non-degree applicable, offered on a Pass/No Pass basis, and may be repeated one time for credit.
0.5 Units
27 Lab hours

ENGL 101 (C-ID ENGL 100)
College Composition and Research
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course may be repeated one time for credit. This is a non-degree applicable course offered on a pass-no pass basis.
0.5 Units
27 Lab hours

ENGL 035
Introduction to College Composition
Prerequisite: ENGL 030 or ENLA 034 or appropriate placement
Corequisite: ENGL 035W
ENGL 035, a foundation-level composition course, prepares students to succeed in transfer-level English courses by developing and reinforcing essential college writing skills. Instruction on utilizing critical reading, thinking, and reasoning skills will be the focus of selected college-level readings. Through the use of engaging thematic units, students will practice effective written communication through a process-centered approach, including pre-writing, drafting, and multiple revisions of their work during the submission process. Throughout the semester, emphasis will be placed on active learning, skill development, as well as tools for college and life success. This is a non-degree credit course and is offered on a pass/no pass basis. In addition to ENGL 035, students will concurrently enroll in the ENGL 035W Writing Workshop where they will take part in workshop-specific assignments and additional individualized activities that complement and strengthen their work in ENGL 035. ENGL 035W Writing Workshop is required and offered on a pass/no pass basis.
3 Units
54 Lecture hours

ENGL 035W
Writing Workshop
Corequisite: ENGL 035
Advisory: READ 022 or appropriate placement
In this course, ENGL 035 students will participate in instruction that is designed to complement the Course Content from ENGL 035. Students will develop and improve their writing and language skills through individualized lessons and conferences with composition instructors. All ENGL 035 students must be concurrently enrolled in this course. This course is non-degree applicable, offered on a Pass/No Pass basis, and may be repeated one time for credit.
0.5 Units
27 Lab hours

ENGL 101 (C-ID ENGL 100)
College Composition and Research
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course may be repeated one time for credit. This is a non-degree applicable course offered on a pass-no pass basis.
0.5 Units
27 Lab hours
This is a composition course that enables students to generate logical, coherent essays and reports necessary to academic and professional success. Students will become proficient in research techniques, learn critical reading and thinking skills through expository and persuasive reading selections, and apply these skills to creating original essays and a final research paper. The lab component of this course is designed to assist students in improving and refining their writing and language skills. Students will complete lab activities that enhance their ability to compose logical, well-supported arguments that exhibit grammatical fluency and correct documentation form. Students will meet with composition instructors through individual conferences that address students’ specific writing concerns. This course is designed for students who wish to fulfill the General Education requirement for Written Communication.

3.5 Units
54 Lecture hours
27 Lab hours

ENGL 104 Tutorial Skills in Composition
Prerequisite: ENGL 101 with a grade of “A” or ENGL 201 with a grade of “A” or “B”
Prerequisite/Corequisite: ED 090
Transfers to: CSU
This course prepares students to tutor in composition/writing. Prospective tutors will be trained to assist students in all stages of the writing process: invention/prewriting, composing/drafting, revising, and editing. Emphasis will be placed on the dialogic nature of the tutoring process in writing. This course is intended for all prospective tutors and coaches who will be helping students in writing.

0.5 Units
9 Lecture hours

ENGL 125 Grammar and Usage
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course explores parts of speech, varieties of sentence structures, common grammar and usage problems, and how to apply these issues to real-world communications. It is designed for students who wish to expand their knowledge of standard American English and thereby increase their skill in the written and spoken language. It is especially helpful for students planning to go into teaching.

3 Units
54 Lecture hours

ENGL 126 Languages of the World
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a linguistics course which covers the major languages families of the world and representative languages from those families. It presents the phonology, morphology, syntax, and pragmatics of these languages. It is specifically targeted at those who will be working with non-native speakers of English in order to equip them to recognize the cross-linguistic influences of other languages on English, thus preparing them to communicate more effectively with their clients and/or students and to assess the linguistic and sociolinguistic factors which affect communication. This course is useful for majors in foreign language, anthropology, communications, health science, and English, and especially for those planning to enter elementary and secondary teaching in California, with its diversity of languages and cultures.

3 Units
54 Lecture hours

ENGL 127 Language Structure and Language Use: Introduction to Linguistics
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course explores the nature and structure of world languages. Students will study whole language development through discourse and semantics. The structure of words, which includes phonology, morphology, how words are used together in sentences, syntax, will also be explored. The tool to decode worldwide sounds, the International Phonetic Alphabet, will be a key element in the course. Students will also discuss the difference between learning a language and acquiring language. This course is beneficial for future teachers and for those majoring in any foreign language, English, communications, and anthropology. This course is designed for students eligible for the Honors Program.

3 Units
54 Lecture hours

ENGL 131 (C-ID ENGL 200) Creative Writing
Prerequisite: ENGL 101
Transfers to: UC, CSU
This is a course of expression for students who are interested in various forms of writing. It offers students a workshop setting in which to develop their writing skills in various genres, such as fiction, poetry, and playwriting. Students are required to write regularly, present their own work in class for discussion, and develop critical standards for evaluating the merit of their own work and of the work of their peers.

3 Units
54 Lecture hours

ENGL 201 (C-ID ENGL 105) Advanced Composition and Critical Thinking
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
("Students will receive credit for only one of the following courses: ENGL 201 or ENGL 201H"
This advanced composition course is open to all students who have successfully completed ENGL 101 and is designed for those who expect to transfer to four-year colleges or universities. Students will read and write extensively, while applying critical thinking skills and research techniques. Students will demonstrate these abilities in advanced composition as they research and write a series of argumentative essays, which demonstrate the ability to analyze issues, evaluate positions, and argue persuasively through clear, concise prose. The lab component of this course is designed to assist students in advancing and refining their writing and language skills and will augment their ability to exercise critical thought. Students will complete lab activities that further enhance their ability to compose logical, well-supported arguments that exhibit grammatical fluency and
ENGL 299
Directed Study: English
To: CSU

This independent study/directed study course is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in this independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units
54 to 162 Lab hours

ENGL 325
Technical and Professional Writing
Prerequisite: ENGL 201 or ENGL 201H

This upper division General Education course is designed for students pursuing a Bachelor's degree in Automotive Technology and is open to all students who have successfully completed ENGL 201 or ENGL 201H. Students will develop report writing and oral presentation skills on technical subjects relevant to automotive and transportation-related industries, business, science, government, and other similar fields. Written assignments will comprise short forms including technical description, proposals, manuals, and journal articles, as well as longer formal papers, feasibility studies, and technical reports. This course will help students develop principles of clear writing appropriate to Automotive Industry standards.

3 Units
54 Lecture hours

ENLA 011
Basic Vocabulary
Advisory: ENLA 014 or appropriate placement

This course is designed to help non-native speakers of English learn meanings, forms, uses, and pronunciations of 200-250 English words not presently in their vocabulary. Special emphasis is given to examining words in context, parts of speech, and inflections. This course is offered on a pass/no pass basis and is not applicable to the degree.

3.5 Units
54 Lecture hours
8 Lab hours

ENLA 022
Intermediate Speaking and Listening
Advisory: ENLA 012 or appropriate placement

This course is for ENLA students who wish to improve their English speaking and listening skills at an intermediate level. Areas of emphasis include pronunciation, oral communication, note taking and organizational skills. This course is offered on a pass/no pass basis and is not applicable to the degree.

3 Units
54 Lecture hours
27 Lab hours

ENLA 012
Beginning Speaking and Listening

This course is for English language learners who wish to improve their conversational skills in English. Areas of emphasis include dictation, English phrasing patterns, various speaking situations, listening practice, and self-correction. This course is offered on a pass/no pass basis and is not applicable to the degree. Students are expected to complete an additional 8 hours TBA (To Be Arranged) in the Language Lab.

3 Units
54 Lecture hours
8 Lab hours

ENLA 013
Basic Grammar
Advisory: NESL 018 or appropriate placement

This is an introductory grammar course for non-native speakers of English. Through reading, writing, listening, and speaking activities, students learn basic English grammar while focusing on verb structures. This course is offered on a pass/no pass basis and is not applicable to the degree. Students are expected to complete an additional 8 hours TBA (To Be Arranged) in the Language Lab.

3 Units
54 Lecture hours
8 Lab hours

ENLA 014
Beginning Composition
Advisory: NESL 018

This course is designed to help limited English-speaking students communicate better in English. The course focuses on the development of written skills. Topics specifically emphasized are idiomatic expressions, vocabulary, reading, and writing. These are taught at an entry level. This course is offered on a pass/no pass basis and is not applicable to the degree.

3.5 Units
54 Lecture hours
27 Lab hours

ENGLISH AS A NEW LANGUAGE
Division of Communications & Languages

ENLA 011
Basic Vocabulary
Advisory: ENLA 014 or appropriate placement

This course is designed to help non-native speakers of English learn meanings, forms, uses, and pronunciations of 200-250 English words not presently in their vocabulary. Special emphasis is given to examining words in context, parts of speech, and inflections. This course is offered on a pass/no pass basis and is not applicable to the degree. Students are expected to complete an additional 8 hours TBA (To Be Arranged) in the Language Lab.

3 Units
54 Lecture hours
8 Lab hours

ENLA 022
Intermediate Speaking and Listening
Advisory: ENLA 012 or appropriate placement

This course is for ENLA students who wish to improve their English speaking and listening skills at an intermediate level. Areas of emphasis include pronunciation, oral communication, note taking and organizational skills. This course is offered on a pass/no pass basis and is not applicable to the degree. Students are expected to complete an additional 8 hours TBA (To Be Arranged)
in the Language Lab. Students initially enrolled in the course will be assessed and only those passing the assessment will be allowed to remain.

3 Units
54 Lecture hours
8 Lab hours

ENLA 023
Intermediate Grammar
Advisory: ENLA 013 or appropriate placement; ENLA 024 or appropriate placement
This course presents a multi skills approach to English grammar and sentence structure for second language students. Through reading, writing, listening, and related activities such as dictation, close exercises, and sentence analysis, students practice the elements of correct English while focusing on verbs and verb forms. This course is offered on a pass/no pass basis and is not applicable to the degree. Students are expected to complete and additional 8 hours TBA (To Be Arranged) in the Language Lab. Students initially enrolled in the course will be assessed and only those passing the assessment will be allowed to remain.

3 Units
54 Lecture hours
8 Lab hours

ENLA 024
Intermediate Composition
Prerequisite: ENLA 014 or appropriate placement
This is an intermediate composition class for non-native speakers of English focusing on the fundamentals of academic writing in English. Basic sentence structures, paragraph development, composition forms, English grammar and word usage are studied in various rhetorical modes. This course is offered on a pass/no pass basis and is not applicable to the degree.

3.5 Units
54 Lecture hours
27 Lab hours

ENLA 032
Advanced Speaking and Listening: Pronunciation and Accent Reduction
Advisory: READ 022 or appropriate placement; ENLA 022 or appropriate placement
ENLA 032 is a speaking, listening and pronunciation course intended for students who need further practice in spoken English and/or have difficulty understanding native speakers of English in academic and other situations. Its purpose is improved the pronunciation, articulation, speed and comprehension of non-native speakers of English. The course focuses on sounds in isolation, the blending of sounds in phrasal elements and the production of sentences incorporating correct intonation, accent, speed and rhythm. This course is offered on a pass/no pass basis and is not applicable to the degree.

3 Units
54 Lecture hours
8 Lab hours

ENLA 034
Intermediate Advanced Composition
Prerequisite: ENLA 024 or appropriate placement
A continuation of ENLA 024, this course is for ENLA students and emphasizes longer writings with more complicated sentence patterns leading up to a basic essay. Students focus on both thematic and rhetorical modes of composition while they practice topic sentences, thesis statements, subordination, and transitional expressions. This course is offered on a pass/no pass basis and is not applicable to the degree.

3.5 Units
54 Lecture hours
27 Lab hours

ENLA 100
Advanced Composition
Prerequisite: ENLA 034 or appropriate placement
Transfers to: UC, CSU
ENLA 100 is the highest-level course of the ENLA writing sequence and an ENLA student’s gateway to ENGL 101. As a result of taking this course, students will be able to utilize various stages of the writing process, MLA conventions of academic writing in several rhetorical modes (including a research paper), and advanced levels of grammatical and mechanical accuracy in their writing.

3.5 Units
54 Lecture hours
27 Lab hours

ET 120
Introduction to Alternative Energy Technology (Same as AET 120)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This course is an introductory course that will examine the theory behind present day energy systems which will include an in-depth analysis of the design and installation of alternate energy systems. Topics will include: solar electrical systems, wind electrical systems, solar water heating systems, wind mechanical systems, small hydro-electrical systems, and conservation methods used to save energy. Also presented are topics on geothermal energy, fuel cells, biomass systems, and applications of alternate energy in transportation, industrial, commercial, and residential systems. Students will collect solar data using an irradiance meter and determine power consumption of a typical residence to develop an alternative energy solution. This course is intended for students that are contemplating a career in the alternative energy industry.

3 Units
45 Lecture hours
27 Lab hours

ET 121
Photovoltaic Systems Design and Installation (Same as AET 121)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This in an introductory course that will examine and implement the design and installation of solar photovoltaic power systems, which will include the installation of a working solar photovoltaic power system. Students will learn how to perform solar site evaluations, electrical load calculations, solar system size calculations, and installation techniques for grid-tie and off-the-grid photovoltaic systems. This course is designed to prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Exam. This course is intended for students that are contemplating a career in the solar photovoltaic energy
ET 122 Advanced Photovoltaic Systems Design and Installation (Same as AET 122)
Prerequisite: AET/ET 121
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is the second course in the photovoltaic series that will further examine and implement the design and installation of solar photovoltaic power systems. Students will learn how to interpret the National Electrical Code (NEC) specifics concerning photovoltaic installations. The topics include code compliant wiring of modules, inverters, charge controllers, batteries, grounding techniques and related topics. Additional topics include the design and installation of large commercial photovoltaic systems. This course is intended for students that are interested in a career in the solar photovoltaic energy industry.
3 Units
45 Lecture hours
27 Lab hours

ET 123 Wind Energy Systems Design and Installation (Same as AET 123)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is an introductory course that will examine and implement the design and installation of wind power systems which will include the installation of a working wind generation power system. Students will learn how to perform wind site evaluations, electrical load calculations, wind system size calculations, hydraulics fundamentals, basic aerodynamics, and installation techniques for wind power generation systems. Students will learn how to design and install wind power generation system and obtain skills for employment. This course is intended for students that are contemplating a career in the wind turbine power generation industry.
3 Units
45 Lecture hours
27 Lab hours

ET 124 Advanced Wind Energy Systems Design and Installation (Same as AET 124)
Prerequisite: AET/ET 123
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: CSU
This is the second course in the wind energy series that will further examine and implement the design and installation of wind power systems. Students will learn how to interpret the National Electrical Code (NEC) specifics concerning wind power installations. The topics include code compliant wiring of modules, inverters, charge controllers, grounding techniques and related topics. Additional topics include wind site evaluations, electrical load calculations, wind system size calculations, hydraulic fundamentals, basic aerodynamics, and installation techniques for large wind power generation systems. This course is intended for students that are contemplating a career in the wind turbine power generation industry.
3 Units
45 Lecture hours
27 Lab hours

ET 130 Health Effects of Environmental Hazardous Materials
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; BIOL 120; BIOL 120L; CHEM 110
Transfers to: CSU
This course is designed to educate individuals working in or seeking employment in areas that include health and safety responsibilities. It provides an overview of how to identify and evaluate the hazards of chemical, physical and biological agents that can be encountered in industrial operations, waste disposal and remediation sites.
3 Units
45 Lecture hours

ET 150 Hazardous Waste Management Applications
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU
This course is designed to provide individuals, who are working in or seeking employment in the environmental field with an overview of the basic physical and chemical nature of groundwater aquifer systems, an overview of the techniques of sampling protocols for obtaining groundwater samples based on US EPA approved sampling protocols, and an introduction to groundwater pollution, remediation, and protection. Emphasis is placed on developing practical working knowledge of
groundwater resources, groundwater protection, and groundwater remediation.

3 Units
54 Lecture hours

ET 181
Home Energy Management and Auditing (Same as AET 181)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU

This course is designed to provide individuals, who are working in or seeking employment in the green energy field, with an overview of home energy management and auditing. Specifically, this course will assist students in their preparation of a comprehensive home energy audit and energy management program. Emphasis is placed on the following topics: Appliances, Insulation, Designing/Remodeling, Electricity, Landscaping, Lighting, Space Heating and Cooling, Water Heating, Doors/Windows/Skylights, and Home Energy Audits.

3 Units
54 Lecture hours

ET 182
Industrial Energy Management and Auditing (Same as AET 182)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU

This course is designed to provide individuals, who are working in or seeking employment in the green energy field, with an overview of the industrial energy management and auditing. Specifically, this course will assist students in their preparation of a comprehensive energy audit and energy management program. Emphasis is placed on the following topics: Types of Energy Audits, Energy Management and Cost, Benchmarking, Energy Performance, Energy Use Requirements, Maximizing System Efficiencies, Optimizing Energy Input Requirements, Fuel and Energy Substitution, and Energy Audit Instruments.

3 Units
54 Lecture hours

ET 200
Hazardous Materials Management Applications
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU

This course is designed to provide individuals, who are working in or who seek employment in the hazardous materials management field, with a general overview of the requirements and applications of federal, state, and local laws and regulations relating to hazardous materials. The course will emphasize compliance with Department of Transportation, OSHA Hazard Communications, SARA Title III Community Right-to-Know, Underground Tank, Asbestos, Proposition 65, and Air Toxics Regulations.

4 Units
54 Lecture hours
54 Lab hours

ET 220
Fundamentals of Safety and Health I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement, ET 230, or working in General Industry, Construction, or in the Safety and Health Field
Transfers to: CSU

This course is designed to introduce the student to the field of Occupational Safety and Health and Program Development. Topics include instruction on Federal, State and Local Agency legislation and the application of Labor and Occupational Safety and Health regulations. The course content also includes familiarization with Workers Compensation/General Liability Insurance, Accident Investigation Techniques, Industrial Hygiene, Ergonomics, Fire Prevention, Site and Facility Auditing, Systems Safety and Program Development. This course is for individuals that are pursuing a degree in Environmental Technology, Safety & Health or for working supervisors, professionals or business owners that are responsible for worker safety or placement of workers compensation/general liability insurance. This course is a requirement for AS and/or Certificate of Achievement in Environmental Technologies with specialization in health and safety.

3 Units
54 Lecture hours

ET 240
Solid Waste Management Applications
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU

This course is designed to provide individuals, who are working in or seek employment in the solid waste management field, with an overview of the solid waste industry and its components. Emphasis is placed on the various aspects of Integrated Waste Management including: waste prevention, recycling, composting, incineration, landfilling, environmental sampling and monitoring, facility siting and permitting, and compliance with environmental, health and safety regulations.

4 Units
54 Lecture hours
54 Lab hours

ET 250
Fundamentals of Safety and Health II
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement, ET 230, or working in General Industry, Construction, or in the Safety and Health Field
Transfers to: CSU

This course is designed to introduce the student to the supervisory and management functions of Occupational Safety and Health and Risk Management. Topics include a review of Federal, State and Local Agency Legislation, Labor and Occupational Safety and Health regulations and Workers Compensation insurance. The course content will focus on the Elements of Safety and Health Program Development, Behavior Based Safety, Workplace Violence, Terrorism Preparedness, Hazardous Materials and Waste Management, Application of Occupational Safety and Health design/compliance, regulations and development of the Safety and Health and Loss Prevention Program (Policy through QA/QC). This course is for individuals that are pursuing a degree in Environmental Technology, Safety & Health.
ET 260
Environmental Sampling and Analysis
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; BIOL 120; BIOL 120L; CHEM 110
Transfers to: CSU
This course provides an overview of the techniques of sampling protocols for obtaining soil, air, surface water, and groundwater samples based on the U.S. EPA approved sampling protocols. In the lecture, emphasis is placed on the aspects of the procurement of the samples through the EPA approved standard operating procedures and practices. In the laboratory, the student will gain practical knowledge and skills for the appropriate collection and handling of environmental samples.
3 Units
54 Lecture hours 54 Lab hours

ET 270
Wastewater Treatment Plant Operations I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This is the initial course of a series of water treatment courses designed to train individuals, who are working in or who seek employment in the waste water treatment field, in the practical aspects of operating and maintaining wastewater treatment plants, emphasizing the use of safe practices and procedures. Information presented includes the role and responsibilities of a treatment plant operator, an explanation of why wastes must be treated, and detailed descriptions of the equipment and processes used in a wastewater treatment plant. Students will learn to operate and maintain racks, screens, comminutors, sedimentation tanks, trickling filters, rotating biological contactors, package activated sludge plants, oxidation ditches, ponds, and chlorination facilities. Students will also learn to analyze and solve operational problems and to perform mathematical calculations relating to wastewater treatment process control.
3 Units
54 Lecture hours

ET 271
Wastewater Treatment Plant Operations II
Prerequisite: ET 270
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This is the second course of a series of water treatment courses designed to train individuals, who are working in or who seek employment in the waste water treatment field, with the practical aspects of operating and maintaining wastewater treatment plants, emphasizing the use of safe practices and procedures. Information presented includes: conventional activated sludge processes, sludge digestion and solids handling, effluent disposal, plant safety and good housekeeping, plant and equipment maintenance, analysis and presentation of data, and records and report writing. Students will also learn to analyze and solve operational problems and to perform mathematical calculations relating to wastewater treatment process control.
3 Units
54 Lecture hours

ET 272
Advanced Wastewater Treatment
Prerequisite: ET 271
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This is the third course in a series of water treatment courses designed to train individuals who are working in or who seek employment in the waste water treatment field in the practical aspects of operating and maintaining wastewater treatment plants and emphasizes the use of safe practices and procedures. Topics presented include: detailed descriptions of the equipment and advanced treatment processes used for odor control, pure oxygen activated sludge treatment, solids removal from secondary effluents, residual solids management, enhanced biological control including nitrogen and phosphorus removal, and wastewater reclamation. Students will learn to operate and maintain treatment plant instrumentation equipment and systems. Additionally, students will also learn to analyze and solve operational problems and to perform mathematical calculations relating to wastewater treatment process control. This course focuses on actual operating procedures and teaches students to analyze and solve operational problems.
3 Units
54 Lecture hours

ET 273
Stormwater Management, Treatment and Controls
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed to provide individuals, who are working in or are seeking employment in the industrial stormwater management field, with the skills necessary to manage stormwater activities at industrial sites. Such management activities would include the ability to: write stormwater plans, implement structural and non-structural best management practices, evaluate and design stormwater treatment systems, conduct laboratory testing, understand how to collect stormwater samples, evaluate low impact development methods, and understand the regulatory and political framework of stormwater management. Emphasis will be placed on the following topics: stormwater chemistry, water treatment, student designed industrial treatment systems, auditing for compliance, monitoring of the industrial effluent, interpretation of laboratory results, and how to apply the data to achieve real reductions in effluent contaminated by industrial pollutants.
3 Units
54 Lecture hours
ET 275
Water Treatment
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed to provide individuals, who are working in or seeking employment in the water management field, with the practical aspects of operating and maintaining water treatment plants. Topics will include: responsibilities of the water treatment plant operator, sources of water, reservoir management and intake structures, coagulation and flocculation, sedimentation and filtration, disinfection and corrosion control, and taste and odor control. Day to day operating procedures will be highlighted in this course and will consist of the following topics: daily operating procedures, regulation of flows, chemical use and handling, records and reports, plant maintenance, safety and security, emergency procedures, handling complaints, and energy conservation.
3 Units
54 Lecture hours

ET 276
Water Distribution
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed to provide individuals, who are working in or seeking employment in the water management system, with the practical aspects of operating and maintaining water distribution systems. Topics include: role and duties of water distribution system operators, procedures for operating and maintaining clear wells and storage tanks, characteristics of distribution system facilities, operating and maintaining distribution systems, maintaining water quality, disinfecting water systems, and techniques for recognizing hazards and developing safe procedures and programs. Operators also learn to analyze and solve problems associated with operating a distribution system.
3 Units
54 Lecture hours

ET 280
Green Building Design Principles
(Same as AET 280)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed to provide individuals, who are working in or seeking employment in the green building field, with an overview of the green building industry and its components. Specifically, this course will assist students in their preparation for the Leadership in Energy and Environmental Design Accredited Professional (LEED AP) Examination, which is the most recognized professional accreditation for green building in the nation. Emphasis is placed on the six categories of design that green buildings must address for LEED Certification: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality, and Innovation & Design Process. Each of these categories will be studied, with a focus on the significance of each particular credit.
3 Units
54 Lecture hours

ET 290
Cooperative Work Experience/Internship for Environmental Technology
Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of environmental technology and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 hours

ET 299
Directed Study: Environmental Technology
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals.
Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester.
Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 3 Units
54 to 162 Lab hours

FINANCE
Division of Business

FIN 101
Introduction to Financial Planning
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course provides an overview of the fundamentals of financial planning, and is designed to provide students with tools needed to achieve their personal financial goals. Students will learn to make informed decisions related to spending, saving, borrowing, and investing by applying quantitative reasoning concepts. Course topics include the financial planning process, budgeting, cash flow, debt consolidation, investing, and retirement planning.
3 Units
54 Lecture hours

FIN 102
Fundamentals of Financial Management and Investing
Prerequisite: FIN 101
Advisory: MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course will provide an introduction to financial management and investment decision-making involv-
ing stocks, bonds, mutual funds, government securities, options, and real estate. Topics include asset allocation principles, modern portfolio theory, investment tools and strategies, diversification, and tax implications of investments. This course is designed for students interested in pursuing a finance certificate or entry-level position in financial planning.

3 Units
54 Lecture hours

FIRE ACADEMY
Division of Public Safety

FAC 118
Basic Fire Academy
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course meets the Los Angeles County Fire Services requirements for designation as a “California Firefighter I Accredited Academy” (ARA or Accredited Regional Academy by the California State Fire Marshal). Students who complete this course also receive California certification in Vehicle Extrication, Fire Control I & II, Hazardous Materials First Responder Operational, Confined Space Awareness, Rescue Systems I, S-110, S-130, S-190, Rapid Intervention Crew Tactics and ICS –200. This course requires completion of a medical physical examination and includes arduous physical activity.
18 Units
126 Lecture hours
616 Lab hours

FAC 120
Firefighter I
Basic Fire Academy with EMT
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for recently employed firefighters and other interested students. Topics covered include organization of the public and private fire service, characteristics and behavior of fire, fire hazards and firefighter safety, extinguishing agents and related extinguishing equipment, fire protection systems and water supply, incident command system, confined space awareness, building construction and assemblies, basic firefighting tactics and strategy, fire prevention, hazardous materials, emergency care, wild land firefighting, Rapid Intervention, Rescue Systems and physical fitness. This course meets the State Board of Fire Services requirements for designation as a “California Firefighter I Accredited Academy” (ARA or Accredited Regional Academy by the California State Fire Marshal). Students who complete this course also receive California certification in Vehicle Extrication, Fire Control I & II, Hazardous Materials First Responder Operational, Confined Space Awareness, Rescue Systems I, S-110, S-130, S-190, Rapid Intervention Crew Tactics, Firefighter Safety and Survival and ICS –200. This course requires completion of a medical physical examination and includes arduous physical activity.
22 Units
136 Lecture hours
783 Lab hours

FAC 4305
Hazardous Material Identification
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is for fire department personnel and other interested students that want to learn about the current laws and regulations pertaining to the labeling of hazardous materials and the UN Hazardous Classifications. The National Fire Protection Association (NFPA) guidelines and the Department of Transportation (DOT) rules and regulations will be presented in this class.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4310
Management Orientation
Prerequisite: MATH 030 or MATH 030D or MATH 030R or appropriate placement; FTEC 101; FTEC 102; FTEC 103; FTEC 104; FTEC 105; FTEC 106
Advisory: BIOL 125
This course is designed for recently employed firefighters and other interested students. Topics covered include organization of the public and private fire service, characteristics and behavior of fire, fire hazards and firefighter safety, extinguishing agents and related extinguishing equipment, fire protection systems and water supply, incident command system, confined space awareness, building construction and assemblies, basic firefighting tactics and strategy, fire prevention, hazardous materials, emergency care, wild land firefighting, Rapid Intervention, Rescue Systems and physical fitness. This course meets the State Board of Fire Services requirements for designation as a “California Firefighter I Accredited Academy” (ARA or Accredited Regional Academy by the California State Fire Marshal). Students who complete this course also receive California certification in Vehicle Extrication, Fire Control I & II, Hazardous Materials First Responder Operational, Confined Space Awareness, Rescue Systems I, S-110, S-130, S-190, Trench Rescue, Rapid Intervention Crew Tactics, Firefighter Safety and Survival and ICS –200. This course requires completion of a medical physical examination and includes arduous physical activity.
20 Units
140 Lecture hours
783 Lab hours

FAC 4315
Arson Scene Investigation
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is for fire department personnel and other interested students that want to learn about the current laws and regulations pertaining to the labeling of hazardous materials and the UN Hazardous Classifications. The National Fire Protection Association (NFPA) guidelines and the Department of Transportation (DOT) rules and regulations will be presented in this class.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4326
Paramedic Support Operations
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for fire department personnel and other interested students who may assists paramedic units at the scene of emergencies. Patient preparation, stabilization and paramedic coordination will be reviewed. Common terminology will be included. This course meets the Los Angeles County
FAC 4327
Fire Fighting Operations, Structures
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for fire department personnel and other emergency responders who seek additional coursework in fighting structure fires. A review of basic firefighting tactics and strategy for occupancies such as dwellings, commercial occupancies, industrial occupancies, and special occupancies will be included. Emphasis will be placed on safety to personnel and crew cohesiveness.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4328
Fire Fighting Operations, Mobile Units
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for fire department personnel and other emergency responders who seek additional coursework in fighting fires where mobile units are burning. A review of basic firefighting tactics and strategy specifically for cars, trucks, buses, ships, planes and trains will be discussed. This course will also present information related to terrorist acts while utilizing mobile equipment. Emphasis will be placed on safety to personnel.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4329
Fire Fighting Operations, Hazardous Materials
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for fire department personnel and other interested students who seek information related to response to fires where hazardous materials are present. A basic review of hazard classifications, response concerns when hazardous materials are present, and responder safety is discussed. This course will also present basic response issues related to terrorist acts involving hazardous materials.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4330
Driving Techniques and Certification
Prerequisite: Appropriate DMV driver’s permit (when required)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed to train firefighters and other interested students to drive emergency response vehicles that include fire engines, fire trucks and ambulances under emergency and non-emergency conditions. This course will include classroom discussion, driving demonstrations, and driving practice. This course may require students to provide the necessary driving permits needed through the DMV prior to class participation.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4331
Pumping Techniques and Certification
Advisory: ENGL 035 or ENLA 100 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to train students to operate fire apparatus under emergency and non-emergency conditions. It integrates the physical properties of modern fire apparatus suppression systems, pump theory and operation, hydraulic calculations, water supply considerations, relay pumping principles, water shuttle operations, foam systems operation and apparatus maintenance and testing. This course will include classroom discussion, pumping demonstrations, and pumping practice.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4335
Special Equipment Familiarization
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is intended for fire department personnel and other interested students who want to learn more about specialized equipment used in today’s fire service. Such equipment as the jaws of life, compressor units, lighting units, life-saving equipment and command equipment will be included.
0.074 to 1.482 Units
2 to 40 Lecture hours
2 to 40 Lab hours

FAC 4344
Fire Instructor 1A
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is the first of a two-course series designed to prepare Fire Service or other interested students to become a California Certified Fire Instructor. This is one of the State Board of Fire Services accredited courses and applies to California Fire Service Training and Educational System certifications. Topics covered include Occupational Analysis, course outline, concepts of learning, levels of instruction, behavioral objectives, lesson plan development, psycholgy of learning and instructor evaluation. Student teaching demonstrations are required of all.
2 Units
40 Lecture hours

FAC 4345
Fire Instructor 1B
Prerequisite: FAC 4344
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
State Board of Fire Services accredited courses in fire service instructional techniques, including methods of instruction, use of audio/visual equipment, employment of instructional aids, test construction, teaching demonstrations and reducing failure rates. This course applies to California Fire Service Training and Educational System certifications.
0.167 to 0.75 Units
8 to 40 Lecture hours

FAC 4346
Fire Prevention 1A
Prerequisite: FAC 4346
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is the first of a two-course series designed to prepare Fire Service or other interested students to become a California Certified Fire Prevention Officer. This is one of the State Board of Fire Services accredited courses and applies to California Fire Service Training and Educational System certifications. Topics covered provide broad, technical overview of fire prevention codes, ordinances, inspection practices and key hazards including responsibilities and authority, occupancy classification & types of construction, Egress requirements, fire resistive assemblies, general fire safety provisions, principles and procedures for fire inspections.
2 Units
40 Lecture hours

FAC 4347
Fire Prevention 1B
Prerequisite: FAC 4347
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is a second in the series of courses required for Fire Officer Certification as it relates to Fire Prevention. It is also designed for Fire Service personnel or other interested
FAC 4348  Fire Investigation I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed to prepare Fire Service or other interested students to become a California Certified Fire Investigator. This is one of the State Board of Fire Services accredited courses and applies to California Fire Service Training and Educational System certifications. This course provides the participants with an introduction to the basics of fire scene investigation. The focus of the course is to provide information on fire scene indicators and to determine the fire’s origin.
2 Units 40 Lecture hours

FAC 4349  Fire Command 1A
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed to prepare Fire Service or other interested students to become a California Certified Fire Officer. This is one of the State Board of Fire Services accredited courses and applies to California Fire Service Training and Educational System certifications. This course provides instruction and simulation for Company Officers. This is one of the State Board of Fire Services accredited course in I-Zone firefighting and elements of the Incident Command System (ICS) for Company Fire Officers. This addresses the three elements of wild land fire behavior including fuel, weather and topography and fundamental elements of size-up as they relate to I-Zone firefighting. The duties and responsibilities of a Strike Team Company Officer and procedures for structure triage and protection are also addressed. This course is designed for firefighting personnel and other interested students who seek certification as a California State Certified “Fire Officer.”
2 Units 36 Lecture hours

FAC 4350  Fire Command 1B
Prerequisite: FAC 4349
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is a continuation of Fire Command 1A and is designed to prepare Fire Service or other interested students to become a California Certified Fire Officer. This is one of the State Board of Fire Services accredited courses and applies to California Fire Service Training and Educational System certifications. This course provides the student with information on tactics, strategies and scene management for multi-casualty incidents, hazardous materials incidents and wildland fires. Each student also has the opportunity to increase his or her knowledge and skills by handling initial operations at these types of incidents through simulation and class activities.
2 Units 40 Lecture hours

FAC 4361  Fire Command 1C 1-Zone Fire Fighting for Company Officers
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This is a State Board of Fire Services accredited course in I-Zone firefighting and elements of the Incident Command System (ICS) for Company Fire Officers. This addresses the three elements of wild land fire behavior including fuel, weather and topography and fundamental elements of size-up as they relate to I-Zone firefighting. The duties and responsibilities of a Strike Team Company Officer and procedures for structure triage and protection are also addressed. This course is designed for firefighting personnel and other interested students who seek certification as a California State Certified “Fire Officer.”
2 Units 36 Lecture hours

FIRE TECHNOLOGY
Division of Public Safety

FTEC 044  Physical Fitness and Ability for the Firefighter
Prerequisite: Student must be able to lift 75lbs., drag a 150 pound “drag dummy”, and use a sledge hammer in completion of a physical abilities test.
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed to give in-service firefighters and interested students information about conditioning and fire department physical ability test designs and will include manipulative drills in order to be successful in passing California PAT’s (Physical Abilities Tests). This course will provide information on the most recently developed tests in Southern California including the CPAT (Candidate Physical Abilities Test) and the Biddle (Biddle and Associate Validated Test). Students will learn about firefighter wellness programs, review basic nutrition and current NFPA (National Fire Protection Association) standards pertaining to firefighter health and safety. Students must be able to perform basic firefighter activities including climbing, using sledge hammers, dragging 150lb dummies and wearing a self-contained breathing apparatus.
3 Units 54 Lecture hours

FTEC 101  Fire Protection Organization
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides Fire Technology or other interested students with an overview of fire protection issues. Included will be an introduction to the philosophy and history of fire protection and fire service. The organization and function of public and private fire protection services, the laws and regulations affecting fire service and the role of fire departments as part of local government will be explored. Basic fire chemistry, fire protection systems, firefighting strategies and possible career opportunities in fire related fields will also be addressed.
3 Units 54 Lecture hours

FTEC 102  Principles of Fire & Emergency Services Safety & Survival
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course introduces the fire technology or other interested students to the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior changes throughout the emergency services. This course has been updated to meet the National Fire and Emergency Services Higher Edu-
cations, and the development of an incident plan. Basic current fire ground strategies will also be explored in this course.

3 Units
54 Lecture hours

FTEC 106
Fire Protection Equipment and Systems
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the fire technology student with information pertaining to the design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers.

3 Units
54 Lecture hours

FTEC 107
Hazardous Materials I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides fire technology or other interested students with information pertaining to the first responder role when dealing with hazardous materials operations. Hazardous materials decontamination procedures will also be discussed. Classification of hazardous materials and National Fire Protection Association standards (NFPA 472) will be addressed.

3 Units
54 Lecture hours

FTEC 108
Hazardous Materials II
Prerequisite: FTEC 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the fire technology or other interested student with information pertaining to the handling, identification, firefighting practices, and the explosive hazards confronted with during a hazardous materials response. The role of a Hazardous Material Technician and Specialist will be discussed. The types of hazardous materials that could be used during a terrorism event will be covered.

3 Units
54 Lecture hours

FTEC 109
Fire Fighting Tactics and Strategy
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the fire technology or other interested students with information pertaining to the elements of the incident management system, evaluation of information management and critical incident factors including control of incident communications, basic strategy de-
FTEC 114
Fire Investigation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the fire technology or other interested students with an understanding of determining causes of fires, including accidental, suspicious, and incendiary. Topics covered include arson laws, field note taking, and fire cause. Also addressed are the recognition and preserving of evidence, the interviewing of witnesses and suspects, arrest and detention procedures, court demeanor, and the giving of court testimony.
3 Units
54 Lecture hours

FTEC 117
Fire Service Management, Safety and Wellness
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for fire technology majors to provide the student with the concepts, theories and principles of fire service management. Emphasis is placed on the distinctions between management, supervision and leadership. Fire service stress and safety management will be discussed and the national fire service standards will be presented.
3 Units
54 Lecture hours

FTEC 121
Emergency Response
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is intended for students that seek a better understanding of the role and responsibilities of a first responder. This class also meets the State of California Title 22 requirements pertinent to CPR, First Aid and AED (automatic external defibrillation) training as it relates to the EMT (Emergency Medical Technician). This course will also certify the student in CPR for the healthcare professional.
3 Units
36 Lecture hours
54 Lab hours

FTEC 150
Truck Company Operations
Prerequisite: FTEC 118 or Firefighter 1 certification or completion of a CSFM approved Fire Academy
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is for veteran firefighters or other interested students that want to enhance their knowledge and ability as it pertains to the fire ground operations associated with truck company tactics and strategy. Basic roof construction, vertical and horizontal ventilation, forcible entry, positive and negative ventilation, search and rescue, thermal imaging technology, firefighter safety and survival, rapid intervention tactics, elevator rescue and related truck company operations will be discussed.
2.5 Units
25 Lecture hours
60 Lab hours

FTEC 290
Cooperative Work Experience/Internship for Fire Technology Related Fields
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in the Fire Technology field under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in the area of Fire Technology and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of fire technology and have completed or enrolled in the appropriate coursework. Contact the CWE office regarding re-enrollment procedures.
1 Unit
54 to 162 Lab hours

FYS 101
Beyond Words: Visual and Performing Arts in Action
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This seminar course is designed to introduce first-year students to the spirit of academic excellence and intellectual curiosity that lies at the heart of learning. All First-Year Seminar courses explore a common selected theme in depth. This seminar course will approach the selected theme as a conduit for understanding the visual and performing arts. FYS 101 will examine the artist’s use of an abstracted language that moves beyond words to the visual, aural, and kinesthetic. Students are invited to explore creativity, innovation, self-expression, imagination, close observation, introspection, and inquisitiveness as artistic responses to the world around us. This seminar will then examine how visual and performing artists give shape to these responses by applying skill and ingenuity. Through inquiry-based instruction and active learning, students develop into self-directed problem-solvers. Coursework will build throughout the semester toward a culminating project in a variety of media. Through presentations, guest speakers, and field trips, students will be exposed to professions and fields of study in dance, design, film, music, theater, and visual art.
3 Units
54 Lecture hours
### FYS 102
**Business and the Cyber Future**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
*Transfers to: CSU*  
This seminar course is designed to introduce first-year students to the spirit of academic excellence and intellectual curiosity that lies at the heart of learning. All First-Year Seminar courses explore a theme in depth. This seminar course considers the selected theme through the lens of business principles. FYS 102 will explore concepts, strategies, and practices of management, marketing, finance, accounting, information technology, logistics, and human resources. Through inquiry-based instruction and active learning, students develop into self-directed problem-solvers. Coursework will build throughout the semester toward a culminating project in various media. Through presentations, guest speakers, and field trips, students will be exposed to professions and fields of study in business and the cyber future.  
3 Units  
54 Lecture hours

### FYS 103
**Science in Society**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
*Transfers to: CSU*  
This seminar course is designed to introduce first-year students to the spirit of academic excellence and intellectual curiosity that lies at the heart of learning. All First-Year Seminar courses explore a theme in depth. FYS 103 will explore the selected theme through the lens of the natural sciences, their effects on society, and how the pursuit of science has been influenced by social forces. Through inquiry-based instruction and active learning, students develop into self-directed problem-solvers. Coursework will build throughout the semester toward a culminating project in various media. Through presentations, guest speakers, and field trips, students will be exposed to professions and fields of study in the natural sciences.  
3 Units  
54 Lecture hours

### FYS 104
**Understanding the SELFie: Diversity and Human Experiences**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
*Transfers to: CSU*  
This seminar course is designed to introduce first-year students to the spirit of academic excellence and intellectual curiosity that lies at the heart of learning. All First-Year Seminar courses explore a common selected theme in depth. This seminar course will approach the selected theme as a conduit for understanding diversity and human experiences. FYS 104 will explore major themes, problems, theories, and ideologies from both past and present. This seminar encourages student inquiry and analysis into subject matter which continues to shape their lives today. This course challenges students to utilize primary skills found in each discipline in order to explain human experiences, examine historical and contemporary theories, and facilitate their contributions to their communities at large. Through inquiry-based instruction and active learning, students develop into self-directed problem-solvers. Coursework will build throughout the semester toward a culminating project in various media. Through presentations, guest speakers, and field trips, students will be exposed to professions and fields of study in behavioral and social sciences.  
3 Units  
54 Lecture hours

### FYS 105
**Voices, Ideas, and the Power of Language**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
*Transfers to: CSU*  
This seminar course is designed to introduce first-year students to the spirit of academic excellence and intellectual curiosity that lies at the heart of learning. All First-Year Seminar courses explore a common selected theme in depth. This seminar course will consider the selected theme through the lens of written and oral communication. FYS 105 will explore the etymology, analysis, and practice of how we use symbols in society, both orally and in writing. Through inquiry-based instruction and active learning, students develop into self-directed problem-solvers. Coursework will build throughout the semester toward a culminating project in various media. Through presentations, guest speakers, and field trips, students will be exposed to professions and fields of study in language, literature, and verbal expression.  
3 Units  
54 Lecture hours

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### FRENCH
**Division of Communications & Languages**

#### FR 101
**French I**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
*Transfers to: UC, CSU*  
This course is an introduction to the essentials of French language: reading, listening, speaking, and writing skills. Various facets of French-speaking culture (history, philosophy, and politics) will be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those interested in learning to speak French as well as those seeking a degree in the French language.  
4.5 Units  
72 Lecture hours  
27 Lab hours

#### FR 102
**French II**  
*Prerequisite: FR 101 or completion of 2 years of high school French with a grade of “C” or better*  
*Advisory: READ 043 or appropriate assessment; ENGL 035 or ENLA 100 or appropriate placement*  
*Transfers to: UC, CSU*  
This course is a continuation to the essentials of the French language: reading, listening, speaking, and writing skills. Various facets of French-speaking culture (history, philosophy, and politics) will be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those interested in continuing to learn to speak French as well as for those seeking a degree in the French language.  
4.5 Units  
72 Lecture hours  
27 Lab hours
FR 201
French III
Prerequisite: FR 102 or completion of three years of high school French with a grade of “C” or better
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course stresses advanced conversational, reading, writing, and translation skills. Emphasis is placed on understanding spoken French as well as on proficiency and accuracy in speaking French. The course will include an introduction to French literature as well as the reading of one novel in French to be determined by the instructor. Various facets of French culture, philosophy, politics and history will also be explored. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for students who wish to broaden their knowledge in French as well as for those seeking a degree in the French language.
4.5 Units
72 Lecture hours
27 Lab hours

FR 202
French IV
Prerequisite: FR 201 or completion of four years of high school French with a grade of “C” or better
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a continuation of FR 201. The course stresses advanced conversational, reading, writing, and translation skills. Emphasis is placed on understanding spoken French as well as on proficiency and accuracy in speaking French. The course will include an introduction to French literature as well as the reading of one novel in French to be determined by the instructor. In addition to classroom instruction, in addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. Various facets of French culture, philosophy, politics and history will also be explored. This course is intended for those interested in continuing to learn to speak French as well as for those seeking a degree in the French language.
4.5 Units
72 Lecture hours
27 Lab hours

FR 299
Directed Study: French
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 3 Units
54 to 162 Lab hours

GIS 130
Field Data Applications for GIS
Prerequisite: GIS 120
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides students and working professionals an expanded hands-on study on field data collection and methods using various geospatial technology including Global Positioning Systems (GPS) and sUAV (small unmanned aerial vehicles) for applications in Geographic Information Systems (GIS) and Remote Sensing (RMS). Experience in using field data collection enhances GIS technician and analyst employability. Students will research real world applications for public safety, public works, digital humanities and various sciences. This course will include off-campus field trips.
4 Units
54 Lecture hours
54 Lab hours

GIS 150
Small Unmanned Aircraft Systems
Procedures and Regulations
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course prepares the student to pass the FAA Aeronautical Knowledge Test for a Remote Pilot Certificate. Material covers subject areas in the Part 107 Aeronautical Knowledge Test including aerodynamics, aircraft performance, navigation, weather, and aviation regulations. Flight workflow demonstration prepares the student in sUAS operation and flight planning with an overview of trending applications including videography, survey mapping, public safety, and biology.
1.5 Units
18 Lecture hours
27 Lab hours

GEOGRAPHIC INFORMATION SYSTEMS
Division of Career & Technical Education

GIS 120
Introduction to Geographic Information Systems and Spatial Analysis
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; CIT 101
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: GIS 120 or GIS 220)
This course will introduce fundamental concepts of geographic information and spatial analysis, using industry standard geospatial application tools including geographic information systems (GIS), global positioning systems (GPS), cartography, remote sensing. Students will learn how to use geospatial technologies to perform spatial analysis in various disciplines including but not limited to business, public safety, health, politics, engineering, environmental, and social, biological and geological sciences. Students should have a working knowledge of Windows to be successful in this course.
4 Units
54 Lecture hours
54 Lab hours
GIS 220
GIS Applications
Prerequisite: GIS 120
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; CIT 101
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: GIS 120 or GIS 220)
GIS 220 is designed for students to apply tools learned in GIS120 and introduces geoprocessing methods and new data sets to perform suitability models such as where to locate a new school, or how to determine concentrations of sales, pollutants or crimes within a community. In addition, field work is performed using Global Positioning System (GPS) including development of data dictionary, collection and processing and import into GIS. Additional data import includes CAD and tables. Students are introduced to data delivery including layer and map packages and web mapping. Course may include field trips for student to visit industry meetings and attend off campus GPS exercise.
4 Units
54 Lecture hours
54 Lab hours

GIS 221
Cartography Design and Geographic Information Systems
Prerequisite: GIS 120
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
GIS plays an important role in almost any discipline and improves understanding of information through visual interpretation. This course is designed for students who want a better understanding and methods to effectively present information spatially using conventions of patterns, colors and symbology. Students are introduced to the history of map interpretation, map projections, scales, map accuracy and layout conventions for publication in reports or large formats at emergency operations center. Course may include field trips for student to visit industry meetings and attend off campus GPS exercise.
4 Units
54 Lecture hours
54 Lab hours

GIS 222
Planning and Facilities Management Using GIS
Prerequisite: GIS 120
Corequisite: ENGT 150
Transfers to: CSU
This course uses ArcView GIS as an analytical and information tool for engineers, planners and facility managers to aid in the planning process, facilities management, systems evaluation, maintenance and asset management of large-scale facilities and infrastructure. Included is site management of facilities, city and regional planning, infrastructure based on topological features, evaluation based on growth indicators, population and economic projections, and use of GIS to support contemporary environmental rules and regulations. The course will include production of professional quality maps using ArcView as well as utilizing customized software.
3 Units
54 Lecture hours
36 Lab hours

GIS 220
Geographic Information Systems (GIS) in Environmental Technology
Prerequisite: GIS 120
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
In the environmental field today there are few jobs that do not require a background in Geographical Information Systems (GIS) and Global Positioning Systems (GPS). GIS is today widely applied in planning used for land use and growth management, environmental assessment to disaster response. This course integrates training in GIS with field data collection methods using GPS & Remote Sensing to collect environmental data used interpretively by GIS. Students should have a working knowledge of Windows to be successful in this course. This course may be taken once for credit towards the certificate and repeated once for credit to enhance student skills and proficiency level. Possible day field trips are scheduled to visit local industries and for GPS field work.
3 Units
36 Lecture hours
54 Lab hours

GIS 230
Geographic Information Systems (GIS) and Remote Sensing
Prerequisite: GIS 120
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
Remote Sensing to collect environmental data used interpretively by GIS. GIS is today widely applied in planning used for land use and growth management, environmental assessment to disaster response. This course integrates training in GIS with field data collection methods using GPS & Remote Sensing to collect environmental data used interpretively by GIS. Students should have a working knowledge of Windows to be successful in this course. This course may be taken once for credit towards the certificate and repeated once for credit to enhance student skills and proficiency level. Possible day field trips are scheduled to visit local industries and for GPS field work.
3 Units
36 Lecture hours
54 Lab hours

GIS 280
Geospatial Programming and Web Services
Prerequisite: GIS 120
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
Knowledge of a scripting language is a highly desired skill for the Geographic Information System (GIS) technician. This course teaches how to automate GIS tasks by applying industry common scripting language (Python, Model Builder, etc.). Advanced database management methodologies for spatial data analysis and development of GIS applications will be covered. Upon completion, students will effectively perform programming fundamentals providing easier interface for end users.
4 Units
54 Lecture hours
54 Lab hours

GIS 281
Crime Mapping and Analysis
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
Crime mapping plays an important role in almost any form of crime analysis and can improve our understanding of the important relationships between people, location, time, and crime. As a result, Geographic information systems (GIS) has become an essential tool used by crime analysts to discover crime patterns, implement corrective strategies, optimize resource allocation and to develop crime prevention measures. Students will use ArcGIS to analyze crime series, conduct problem analysis, study crime trends, and address deployment issues as they relate to decision making in law enforcement. Students should have a working knowledge of Windows to be successful in this course.
4 Units
54 Lecture hours
54 Lab hours

GIS 290
Cooperative Work Experience/Internship for Geographic Information Systems Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on the job training in business and industrial establishments under the supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of GIS and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours
1 to 4 Units
3 Lecture hours
60 to 300 Other hours
GIS 299
Directed Study in Geographic Information Systems
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Geographic Information Systems beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

GEOGRAPHY
Division of Mathematics, Sciences, and Engineering

GEOG 101 (C-ID GEOG 110)
Introduction to Physical Geography
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: UC, CSU
Introduction to Physical Geography is a general education course that introduces students to the basic elements of culture. Population growth, migration, ethnicity, language, religion, folk and popular culture, and settlement forms are among the topics presented. This course may be of interest to students considering the field of elementary teaching, ecology, social science, or travel related vocations.
3 Units
54 Lecture hours

GEOG 102 (C-ID GEOG 120)
Introduction to Cultural Geography
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
Introduction to Cultural Geography is a general education course that introduces students to the basic elements of culture. Population growth, migration, ethnicity, language, religion, folk and popular culture, and settlement forms are among the topics presented. This course may be of interest to students considering the field of elementary teaching, ecology, social science, or travel related vocations.
3 Units
54 Lecture hours

GEOG 103 (C-ID GEOG 125)
World Regional Geography
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
World Regional Geography explores the world's geographic regions, including Sub-Saharan Africa, North Africa, Southwest Asia, China, Southeast Asia, Middle America, South America, Japan, Europe, and Russia. This course describes the cultural, economic and environmental aspects of each of these geographic realms. It provides a geographic perspective that will enhance global awareness and geographic literacy.
3 Units
54 Lecture hours

GEOG 299
Directed Study: Geography
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 3 Units
54 to 162 Lab hours

GEOLOGY
Division of Mathematics, Sciences, and Engineering

GEOL 150 (C-ID GEOL 100)
Physical Geology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC, CSU
Physical Geology, which fulfills the physical science general education requirement, is an introduction to the principles of geology with emphasis on Earth processes. This course focuses on the internal structure and origin of the Earth and the processes that change and shape it. Earthquakes, Volcanoes, Oil, Beaches, Tsunamis, Rocks, Rivers, Glaciers,
Plate Tectonics, Minerals, Continent and Mountain Building are among the many diverse topics that are explored.

3 Units

54 Lecture hours

GEOL 151 (C-ID GEOL 100L)
Physical Geology Laboratory

Prerequisite/Corequisite: GEOL 150
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement

Transfers to: UC, CSU

Physical Geology Laboratory engages students with a “hands-on” review of the principles presented in Geology 150 and their application to everyday life. Laboratory exercises will include (but are not limited to) the identification of minerals, igneous, metamorphic and sedimentary rocks, topographic and geologic map exercises demonstrating the work of water, wind, ice and gravity and effects of tectonic activity.

1 Unit

54 Lab hours

GEOL 152 (C-ID GEOL 110L)
Historical Geology

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement

Transfers to: UC, CSU

This course is an introduction to the processes that have influenced Earth’s history and the life it supports. Subjects include geologic dating, global tectonics, stratigraphy, fossils, biological evolution, the planet’s origin and the processes that have influenced paleogeography during the past 4.6 billion years.

3 Units

54 Lecture hours

GEOL 299
Directed Study: Geology

Transfers to: CSU

Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor.

Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals.

Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units

54 to 162 Lab hours

GRAPHIC DESIGN

Division of Arts & Cultural Programs

GDSN 110
History of Graphic Design

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: CSU

This course is a survey of historical developments in graphic design from the Industrial Revolution to the Digital Age. Students will analyze the development of graphic design, its origins as a CTE area and the influences of political, social and economic climates of the different historical periods. This course provides a historical framework for analysis of current and future trends in graphic design and explores various historical art and design movements in order to recognize and evaluate the contexts of fine art, design, and science.

3 Units

54 Lecture hours

GDSN 150
 TYPOGRAPHY

Advisory: READ 022 or appropriate placement; ENGL 030 or ENLA 034, NVOC 285

Transfers to: UC, CSU

This course is for the student interested in the history, theory and practice of Typography as it applies to graphic design, advertising and other areas of design and visual communication. Students will learn and practice hand-rendered and mechanical aspects of Typography and how Typography attracts, informs, educates, inspires and creates retaining impressions and modifies human actions and behavior. Through discussions, exercises, and projects, students will develop an understanding leading to the clearer interpretations of Typography and its role in human history, communication, design and art. Activities include the history and principles of typography, letter structure, typeface selection, fundamentals of typesetting and introductory typographic layout.

3 Units

36 Lecture hours

72 Lab hours

GDSN 151
 Typographic Design

Advisory: GDSN 150

Transfers to: UC, CSU

This course is for the student interested in UX (user experience) design and explores various historical design elements and its relationship to issues of visual hierarchy, readability and page structure. Students continue their exploration of typography as an expressive visual form through typographic design projects.

3 Units

36 Lecture hours

72 Lab hours

GDSN 162
 Introduction to Web Design:

User Experience Design (UX)

Advisory: READ 022 or appropriate placement; ENGL 030 or ENLA 034, NVOC 285

Transfers to: UC, CSU

This introductory Web Design class is a practical introduction for students interested in UX (user experience) and visual interface design and the challenges it poses for the Graphic Designer. Using Web Design applications (like Adobe Dreamweaver and Adobe Photoshop), students are introduced to the steps involved in creating a basic functional interac-
Interactive Design

Prerequisite: GDSN 162
Advisory: READ 022 or appropriate placement; ENGL 030 or ENLA 034 or appropriate placement; NVOC 285
Transfers to: UC, CSU

This course is for the student interested in a degree or certificate in Graphic Design. This course includes portfolio building with an emphasis on professional standards. This course is for the student interested in Graphic Design or those interested in web design and interactive design.

3 Units
36 Lecture hours
72 Lab hours

GDSN 165
Branding and Identity Design

Prerequisite: GDSN 164
Advisory: READ 022 or appropriate placement; ENGL 030 or ENLA 034 or appropriate placement; NVOC 285
Transfers to: CSU

This course is an exploration of Branding and Identity Design, a sub-discipline of Graphic Design. Topics include the research and development of Trademarks and Logos for clients, the Principles and Elements of Design, typography, color, shape stroke, illustration techniques, page layout design, as well as intermediate and advanced critical concepts and professional practices employed by Graphic Designers. This course includes portfolio building with an emphasis on professional standards. This course is for the student interested in a degree or certificate in Graphic Design and those interested in 2-dimensional design and layout applications employed as tools by Graphic Designers.

3 Units
36 Lecture hours
72 Lab hours

GDSN 178 (C-ID ARTS 250)
Digital Imaging Design

Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement; NART 285
Transfers to: UC, CSU

This introductory graphic design course uses bitmap software as the principal digital tool. Topics include the principles and elements of design, typography, color, photo/raster/bitmapped-based scanning, vector graphic integration, time-based design, image formats, optimization, re-touching, adjustments, compositing, blending, color, conceptual, narrative and time-based techniques, technical and creative methods and styles employed by graphic designers as well as well as introductory critical concepts and professional practices. This course includes exercises, projects, and portfolio building with an emphasis on professional standards. This course is for the student interested in obtaining a degree or certificate in graphic design, transfer, and those seeking to pursue a career in graphic design or related professions.

3 Units
36 Lecture hours
72 Lab hours

GDSN 179
Advanced Digital Imaging Design

Prerequisite: GDSN 178
Advisory: READ 022 or appropriate placement; ENGL 030 or ENLA 034 or appropriate placement; NVOC 285
Transfers to: UC, CSU

This course is for the student interested in the theory and practice of letterforms and typography as they apply to graphic design, advertising and other areas of design and visual communication. Focus is on the compositional use of type as a principle design element and its relationship to issues of visual hierarchy, readability and page structure. Students continue their exploration of typography as
HEALTH SCIENCE
Division of Health Science & Nursing

HS 045
Math for the Health Care Professional
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business and industrial establishments. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or be working in a skilled or professional level assignment. This course is intended for students whose job is related to the field of graphic design and have completed or enrolled in the appropriate coursework. This course may be taken once and repeated for a maximum of 16 units. Contact the CWE office regarding re-enrollment procedures.

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours;
3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours;
3 Units/225 hours; 4 Units/300 hours.
1-4 Units
3 Lecture hours
60-300 Other hours

HS 050
Nurse Assistant Pre-Certification Training Course
Corequisite: HS 050L
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Prerequisite: HS 050, HS 050L, and California State CNA Certification
This course is designed for students who are Certified Nurse Assistants that wish to learn the basic nursing skills and duties in the acute care hospital setting with additional emphasis on the specialized acute care areas such as medical/surgical, orthopedics, pediatrics, and obstetrics. The Certified Nurse Assistant Acute Care training course consists of 27 hours of lecture content. This course includes communication, patient observation, reporting and recording training as well as reinforcement of Certified Nurse Assistant basic-care procedures. The Division of Health Science and Nursing requires that students must be concurrently enrolled in both HS 051 and HS 051L, and pass both courses together. They cannot be taken individually for credit.

1.5 Units
27 Lecture hours

HS 050L
Certified Nurse Assistant Acute Care Training Course Lab
Prerequisite: HS 050, HS 050L, and California State CNA Certification
Corequisite: HS 051L
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for students who are Certified Nurse Assistants that wish to learn the basic nursing skills and duties in the acute care hospital setting with additional emphasis on the specialized acute care areas such as medical/surgical, orthopedics, pediatrics, and obstet-
The Certified Nurse Assistant Acute Care course lab consists of 81 hours of clinical practice alongside a clinical employed CNA in an acute care facility with daily/weekly monitoring. This course includes communication, patient observation, reporting and recording training as well as reinforcement of Certified Nurse Assistant basic-care procedures. The Division of Health Science and Nursing requires that students must be concurrently enrolled in both HS 051 and HS 051L, and pass both courses together. They cannot be taken individually for credit.

1.5 Units
81 Lab hours

HS 052
Home Health Aide Training Course Lab
Prerequisite: HS 050, HS 050L and California State CNA Certification
Corequisite: HS 052L
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed for students who are Certified Nurse Assistants that wish to learn how to provide personal care in the home care setting for those who are unable to do it for themselves and/or promote the recovery, safety and comfort of the patient. Additional emphasis on rehabilitative nursing care, family relationships and the impact of long-term illness on the family as well as the client will be included. The Home Health Aide training course consists of 27 hours classroom instruction. This course meets title 22 regulations for Home Health Aides training programs. The California Department of Health requires that students must be concurrently enrolled in both HS 052 and HS 052L, and pass both courses together. They cannot be taken individually for credit.

1.5 Units
27 Lecture hours

HS 052L
Home Health Aide Training Course
Prerequisite: HS 050, HS 050L and California State CNA Certification
Corequisite: HS 052
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed for students who are Certified Nurse Assistants that wish to learn how to provide personal care in the home care setting for those who are unable to do it for themselves and/or promote the recovery, safety and comfort of the patient. Additional emphasis on rehabilitative nursing care, family relationships and the impact of long-term illness on the family as well as the client will be included. The Home Health Aide training course consists of 54 hours supervised clinical practice in either the Acute care or Skilled Nursing Facility. This course meets title 22 regulations for Home Health Aides training programs. The California Department of Health requires that students must be concurrently enrolled in both HS 052 and HS 052L, and pass both courses together. They cannot be taken individually for credit.

1 Unit
54 Lab hours

HS 054
Beginning Terminology for Healthcare Workers
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course covers the basic knowledge and understanding of medical language, terminology, and basic human anatomy. The student will learn word parts, prefixes, suffixes, word roots and will review the body systems. Anatomical, physiological and pathophysiological terms will also be defined. This is an entry-level course for students interested in the health care field and is highly recommended prior to enrolling in any health-related course.

3 Units
54 Lecture hours

HS 060
Health Science Core
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 033 or MATH 033B or appropriate placement
This is a basic course which focuses on medical terminology, normal body structures and functions, the principles of nutrition, and the relationship of nutrition to health. It provides a strong foundation for all students entering the health care field. This course is a prerequisite for the Vocational Nursing Program.

5 Units
90 Lecture hours

HEF 034
Insulation Industry Orientation
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice
Advisory: ENGL 030 or ENLA 034 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include orientation to the trade, industry safety, job-site safety, insulation, pipe systems, OSHA, refinery safety, boom and scissor lift safety, and duct systems.

3 Units
40 Lecture hours
40 Lab hours

HEF 041
Mechanical Piping Systems
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEF 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include insulation materials, techniques, finishes, piping systems, fireproofing, hand tools, fall protection, and equipment used in the field.

3 Units
40 Lecture hours
40 Lab hours

HEF 042
Boiler Insulation
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEF 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include boilers, insulating techniques, stacks, breechings, hi-ribb lath insulation, finishing, ship-yard orientation, pen welding, safety, first-aid, confined space, and fittings.

3 Units
40 Lecture hours
40 Lab hours

HEAT & FROST
Division of Career & Technical Education
HEFR 043 Construction Mathematics
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Mathematical operations commonly used in the construction trade will be reviewed and applied. Topics include whole numbers, fractions, decimals, basic geometry functions, curves and angles, drawings, estimating, energy appraising, insulation certifications, and measurements.
3 Units
40 Lecture hours
40 Lab hours

HEFR 044 Mechanical Piping Insulation
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include heat transfer, general insulating methods, materials, application of insulation materials, coatings, coverings for pipes and fittings, attachment methods, mold recognition and abatement, and finishing for pipes in various thermal ranges.
3 Units
40 Lecture hours
40 Lab hours

HEFR 045 Foam and Firestopping Insulation
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include metal cutting, fittings, band saws, foam materials, spray equipment operations, firestopping insulation, and maintenance and repair of foam application equipment.
3 Units
40 Lecture hours
40 Lab hours

HEFR 046 Blueprint Reading
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include introduction to blueprint reading, general arrangement, symbols, industry standards, insulation drawings, isometric drawings, industry certifications, and shop drawings.
3 Units
40 Lecture hours
40 Lab hours

HEFR 047 Prefabricated Buildings
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the Heat and Frost Insulators Industry. Topics include insulation, design of walls, prefabricated industry panels, prefabricated metal buildings, hazardous materials, and storage tank insulation.
3 Units
40 Lecture hours
40 Lab hours

HEFR 048 Firestop Applications
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the Insulation and Firestop Industry. Topics include layout, fabrication, and installation procedures for firestopping systems on mechanical, electrical, and plumbing penetrations on maintenance and repair.
3 Units
40 Lecture hours
40 Lab hours

HEFR 049 Advanced Life Safety Firestop Application
Prerequisite: State Indentured Heat and Frost Insulator Union Apprentice; HEFR 040; HEFR 048
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the Insulation and Firestop Industry. Topics include advanced layout, advanced fabrication, and advanced installation procedures for firestopping systems on mechanical, electrical, and plumbing penetrations on maintenance and repair.
3 Units
40 Lecture hours
40 Lab hours

HEFR 290 Work Experience in Heat and Frost Insulator Apprenticeship
Prerequisite: State Indentured Heat and Frost Insulator Union Apprenticeship
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides students the opportunity to work in the Heat and Frost Insulators apprenticeship program for the purpose of developing specific skills to meet the goals and objectives of the Heat and Frost Insulator Joint Apprenticeship and Training Committee (J.A.T.C.). Students complete work experience hours at approved training sites. Students may take up to 16 units total across all Work Experience course offerings. Only one Work Experience course may be taken per semester.
1 to 4 Units
3 Lecture hours
75 to 225 Other hours

HEAVY EQUIPMENT TECHNOLOGY
Division of Career & Technical Education

HET 051 Outdoor Power Equipment Operation and Maintenance
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This is an introductory course designed to familiarize the student with the basic operation of a multitude of outdoor power equipment, such as garden tractors, lawn equipment, personal watercraft, portable generators, air compressors, pressure washers and many others that are powered by small displacement internal combustion engines. Students will learn tools and service equipment use and how to safely perform basic repair and maintenance operations.
Students will have the opportunity to perform minor repair work on their own equipment to complete required tasks. This course is designed to be a companion course to HET 052 and HET 053. Students are encouraged to complete all three courses in order to obtain a firm foundation in Outdoor Power Equipment.

**HET 052**
Outdoor Power Equipment Engine Repair

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

This course is designed to provide the student with the skills required to repair the engines used in Outdoor Power Equipment. Emphasis is placed on problem diagnosis, service procedures, proper repair techniques, and machining operations. In addition, the students will learn tools and service equipment use and will have the opportunity to perform repair work on their own equipment to complete required tasks. This course is designed to be a companion course to HET 051 and HET 053. Students are encouraged to complete all three courses in order to obtain a firm foundation in Outdoor Power Equipment.

**Units**
4

**Lecture hours**
54

**Lab hours**
54

**HET 053**
Outdoor Power Equipment Engine Systems

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

This course is designed to provide the student with the skills required to repair the engine systems used in Outdoor Power Equipment. Emphasis is placed on problem diagnosis, service procedures and proper repair techniques of fuel, ignition, lubrication and cooling systems. In addition, the students will learn tools and service equipment use and will have the opportunity to perform repair work on their own equipment to complete required tasks. This course is designed to be a companion course to HET 051 and HET 052. Students are encouraged to complete all three courses in order to obtain a firm foundation in Outdoor Power Equipment.

**Units**
4

**Lecture hours**
54

**Lab hours**
54

**HET 105**
Introduction to Heavy Equipment Technology

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

This is an introductory course designed to familiarize the student with the fundamentals of diesel engines, clutches, manual transmissions, torque converters, automatic transmissions, drive lines, steer and drive axles, various brake and hydraulic systems. In addition, the students will learn basic tools and equipment, and how to safely perform basic repairs and maintenance operations. This is the first course in a series of Heavy Equipment Technology classes, and is designed for the student who wants to enter the field of Heavy Equipment Maintenance and Repair.

**Units**
4

**Lecture hours**
54

**Lab hours**
54

**HET 106**
Heavy Equipment Electrical Fundamentals

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

This introductory course is designed to familiarize the student with the heavy equipment's electrical and electronic systems. Topics covered include fundamentals of electricity, basic circuits, schematics, symbols, diagrams, DVOM, graphing multimeter and oscilloscope usage, wire repair techniques, electrical components, semiconductors (including IC), battery, charging, starting, accessory, and instrumentation systems. Demonstrations using the A-Tech circuit boards will be used to illustrate electrical principles, including strategy-based diagnostics.

**Units**
4

**Lecture hours**
54

**Lab hours**
54

**HET 107**
Heavy Equipment Operation, Performance Testing and Adjusting

*Prerequisite: HET 104; HET 106*

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

This course is designed to familiarize the student with the basics of the heavy equipment electrical systems. Topics include fundamental principles, electrical symbols and schematics, batteries, starting, charging, and lighting systems. Students will learn the proper use of electrical measuring tools and how to safely perform and cut electrical safety, and fall protection. Machine specific terminology, operational inspection, principles of balance and stability, capacity and load handling, refueling, hydraulic power, job site and pedestrian safety will also be covered. Students will learn how to safely verify the machine performance and how to perform minor adjustments of various subsystems if needed. Upon successful completion of this course and forklift operation examination the student will receive a Certificate of Completion and wallet card for Forklift Operator Safety Training as required by OSHA 1910.178(l) and CAL/OSHA Title 8 (Section 3669), which is good for three years, and a 10-hour OSHA Training Certificate of Completion, which is good for life.

**Units**
4

**Lecture hours**
54

**Lab hours**
54

**HET 121**
Introduction to Heavy Equipment Maintenance

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

This is an introductory course designed to familiarize the student with the fundamentals of periodic maintenance of various heavy equipment systems such as engines, hydraulics, drive trains, final drives, and hydraulic and air brake systems. Students will learn basic tools and shop equipment, and how to safely perform routine services and minor repair operations on heavy machinery. This course is designed to be a companion course to HET 122, HET 123, HET 124 and HET 125, and is required for the Heavy Equipment Maintenance Technician certificate. Students are encouraged to complete all five courses in order to obtain a firm foundation in heavy equipment technology.

**Units**
3

**Lecture hours**
45

**Lab hours**
27
to complete all five courses in order to obtain a firm foundation in heavy equipment technology.

3 Units
45 Lecture hours
27 Lab hours

HET 125
Introduction to Diesel Engines, Fuel Systems and Emissions
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This is an introductory course designed to familiarize the student with the basic construction, operation, and emission controls of the four-stroke diesel engine. Topics include engine blocks, rotating assemblies, cylinder heads, valve trains, intake, exhaust, lubrication and cooling systems. In addition, fuel systems and diesel emissions reduction strategies will also be discussed. Students will learn the proper use of diagnostic tools and how to safely perform basic engine tests and minor repairs. This course is designed to be a companion course to HET 121, HET 122, HET 123 and HET 124, and it is required for the Heavy Equipment Maintenance Technician certificate. Students are encouraged to complete all five courses in order to obtain a firm foundation in heavy equipment technology.

3 Units
45 Lecture hours
27 Lab hours

HET 124
Introduction to Heavy Equipment Powertrains
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This is an introductory course designed to familiarize the student with the basic construction and operation of heavy equipment powertrains. Topics include principles of gears, friction clutches, fluid couplings, anti-friction bearings, planetary gears, and differential gear sets. Students will learn the proper use of precision measuring tools and how to safely perform basic powertrain tests and minor repairs. This course is designed to be a companion course to HET 121, HET 122, HET 123 and HET 125, and it is required for the Heavy Equipment Maintenance Technician certificate. Students are encouraged to complete all five courses in order to obtain a firm foundation in heavy equipment technology.

3 Units
45 Lecture hours
27 Lab hours

HET 140
Heavy Equipment Electrical Diagnostics
Prerequisite: HET 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This course is designed to familiarize the student with the heavy equipment’s electrical and electronic systems. Topics include review of electrical theory, circuit faults, electrical and electronic components usage and diagnostics, computers, sensors, actuators, and data communications. A-Tech simulator boards will be used to illustrate different component functions. In addition, the students will be introduced to the strategy based diagnostics, including troubleshooting electrical problems using live equipment.

4 Units
54 Lecture hours
54 Lab hours

HET 150
Heavy Equipment Fuel Systems and Emissions
Prerequisite: HET 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This introductory course is designed to familiarize the students with a wide variety of heavy equipment diesel engine fuel systems and operation. Topics covered include hydro-mechanical systems such as port-helix, inlet-metering, sleeve-metering and mechanical unit injectors as well as computerized management systems including common rail and amplified common rail. Additional topics regarding diesel engine emission control strategies and devices such as diesel oxidation catalyst, diesel particulate filter and selective catalytic reduction will also be covered. Component failure analysis will be discussed as part of testing and adjusting of various fuel systems. In addition, proper shop and personal safety, and how to use manufacturer’s service specifications information will also be covered.

4 Units
54 Lecture hours
54 Lab hours

HET 160
Heavy Equipment Diesel Engines
Prerequisite: HET 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This course is designed to familiarize the students with the mechanical aspects of the Heavy Equipment diesel engines. Topics covered include engine terminology, designs, theory of operation, construction, disassembly, cleaning, components inspection, failure analysis, and reassembly. In addition, proper shop and personal safety, correct usage of shop and hand tools, precision measuring instruments, critical fasteners, and how to use manufacturer’s service specifications information will also be covered.

4 Units
54 Lecture hours
54 Lab hours

HET 200
Heavy Equipment Hydraulic Fundamentals
Prerequisite: HET 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

This introductory course is designed to familiarize the students with a variety of mobile hydraulic systems and their operational characteristics. Topics covered include hydraulics safety, hydraulic power principles, system designs, basic components, oil contamination and filtration, hydraulic symbols, schematics, diagrams, and testing instruments. In addition, an overview of electro-
hydraulic systems including electric and electronic components, controllers, controller programming, and data communication, will also be covered. Hydraulic trainer simulators will be used to illustrate power principles and operation. Using hydraulic schematics the students will build a wide variety of hydraulic systems commonly installed in modern heavy equipment.

4 Units
54 Lecture hours
54 Lab hours

HET 210
Heavy Equipment Hydraulic Diagnostics
Prerequisite: HET 200
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is intended to familiarize the students with the heavy equipment’s hydraulic and electro-hydraulic systems. Topics include review of hydraulic theory and basic hydraulic system designs and components, hydraulic and electronic components used in electro-hydraulic systems, hydraulic controllers, sensors, actuators, and data communications. In addition, the students will be introduced to the strategy-based diagnostics, with an emphasis on electro-hydraulic controls failures, using hydraulic trainer simulators and live equipment.

4 Units
54 Lecture hours
54 Lab hours

HET 220
Heavy Equipment Powertrains I
Prerequisite: HET 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to familiarize the students with conventional Heavy Equipment powertrain systems and components. Topics covered include fundamentals of gears, friction and anti-friction bearings, mechanical clutches, manual transmissions, driveline systems, drive axles, final drives, hydraulic and air brakes, and undercarriage systems. Component failure analysis will be discussed as part of disassembly, inspection, and reassembly of various transmissions, drive axles, and final drives. In addition, proper shop and personal safety, and how to use manufacturer’s service specifications information will also be covered.

4 Units
54 Lecture hours
54 Lab hours

HET 230
Heavy Equipment Powertrains II
Prerequisite: HET 220
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is intended to familiarize the students with a wide variety of modern heavy equipment powertrains systems and components. Topics covered include powershift transmissions, torque converters, hydrostatic drive systems, AC electric drive systems, spring-applied hydraulically released brakes, steering, and suspension systems. Component failure analysis will be discussed as part of disassembly, inspection, and reassembly of various transmissions, drives, brakes and steering systems. In addition, proper shop and personal safety, and how to use manufacturer’s service specifications information will also be covered.

4 Units
54 Lecture hours
54 Lab hours

HET 240
Heavy Equipment Heating, Ventilation and Air-Conditioning
Prerequisite: HET 107
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to familiarize the student with the heavy equipment’s heating, ventilation and air-conditioning systems, and prepare them for an entry level technician in this field. Topics covered include environmental and safety practices, thermodynamic principles, refrigeration systems, engine cooling and heat sources, service and troubleshooting procedures. Automatic systems, service equipment, contamination issues and the rules of AQMD/EPA will also be covered. During the course, students will be given the opportunity to earn their certification license (EPA Rule 1411).

4 Units
54 Lecture hours
54 Lab hours

HET 290
Cooperative Work Experience/Internship for Heavy Equipment Technology Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business and industrial establishments under the supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the heavy equipment maintenance field and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours

Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

HIST 299
Directed Study in Heavy Equipment Technology
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Heavy Equipment Technology beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.

1 to 3 Units
54 to 162 Lab hours

HISTORY
Division of Behavioral & Social Sciences

HIST 101 (C-ID HIST 150)
History of World Civilization to the 17th Century
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a survey of the political, economic and social development of world civilization up to the 17th century. Special emphasis is placed on the origins of the earth’s principal...
centers of civilization, their subsequent interaction, and the emergence of a world economic, political, and intellectual order. This course is designed for the student who wishes to increase their understanding and appreciation of cultural, political, and intellectual diversity, as well as the process of intercultural interaction. This course also satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 102 (C-ID HIST 160)
History of World Civilization, 1500 to the Present
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a survey of the political, economic, and social development of world civilization from 1500 to modern times. Special emphasis is placed on the origins and development of the world economic system and the corresponding cultural, intellectual, and social currents that have characterized most of the world’s leading societies since 1500. This course is intended for the student who wants to increase their understanding and appreciation of both the diversity and the unity of the modern world. This course also satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 122
History of Mexico
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course examines the cultural, social, and political history of Mexico from pre-Columbian to modern times. The course will cover pre-Columbian Mesoamerica, the Spanish conquest and the colonial period, and the national period, with special emphasis given to Mexico’s relations with the United States and its place in the world community. This course is designed for students interested in understanding Mexico as a nation and is also recommended for all history and most social science majors. This course is also a restricted elective for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 131
History of the North American Indian
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course surveys the struggle of Native Americans to maintain their culture in the face of invasion and changing technology. It explores government Indian policies of removal, pacification, annihilation and assimilation, and considers present issues facing Native Americans today. This course is intended for students who wish to understand the role of Native Americans in the historical development of North America. It is recommended for all history majors. This course also satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 143 (C-ID HIST 130)
History of the United States to 1877
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a survey of United States history from Native American origins to post Civil War Reconstruction. Social, economic, political and cultural developments are explored with an emphasis on the independence movement, Revolutionary War, the new Republic, westward expansion and the Civil War. This course is designed for students interested in the foundational history of the United States. It is recommended for all history majors and fulfills the CSU/UC American Institutions requirement and the American Institutions requirement for the Associate degree. This course also satisfies a requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 143H (C-ID HIST 130)
History of the United States to 1877
Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a survey of United States history from Native American origins to post Civil War Reconstruction. Social, economic, political and cultural developments are explored with an emphasis on the independence movement, Revolutionary War, the new Republic, westward expansion and the Civil War. This course is designed for students interested in the foundational history of the United States. It is recommended for all history majors and fulfills the CSU/UC American Institutions requirement and the American Institutions requirement for the Associate degree. This course also satisfies a requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 144 (C-ID HIST 140)
History of the United States Since 1865
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for only one of the following courses: HIST 144 or HIST 144H)
This course provides a survey of the political, social, economic, and cultural development of the United States from Reconstruction (1865) to the present. Some topics addressed are Reconstruction, the American West, capital and labor in the age of enterprise, America as an emerging world power, World War I, World War II, the Vietnam Era, the Cold War, the new world order. This course fulfills the American Institutions requirement for the Associate Degree. It is recommended for all History majors and satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 144H (C-ID HIST 140)
History of the United States Since 1865
Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for only one of the following courses: HIST 144 or HIST 144H)
This course provides a survey of the political, social, economic, and cultural development of the United States from Reconstruction (1865) to the present. Some topics addressed are Reconstruction, the American West, capital and labor in the age of enterprise, America as an emerging world power, World War I, World War II, the Vietnam Era, the Cold War, the new world order. This course fulfills the American Institutions requirement for the Associate Degree. It is recommended for all History majors and satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 156
Black American Experience to 1865
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course also satisfies a requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours
This survey investigates the history of African Americans from their west African origins to the abolition of slavery, roughly dating from the 1400s to 1865. In this course, students will examine the ways, in which, blacks constructed a distinct African American culture, influenced by the African past, shared experiences of enslavement, and the experiences of free blacks. This course will also pay close attention to the methods and tactics employed by blacks to exert control over their lives, highlighting their major successes and achievements, despite myriad forms of oppression and discrimination.

3 Units
54 Lecture hours

HIST 157
Black American Experience Since 1865
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course examines the historical experiences of black Americans from emancipation to the present, paying close attention to the 20th century. This course will navigate and examine the factors that led to the development of a distinct black American culture, a legacy of resistance against legal and extralegal inequities, the acquisition of political and economic rights, and black contributions to the expanding definition of democracy and freedom.

3 Units
54 Lecture hours

HIST 158
US Comparative History of American Indians and Black Americans
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a survey of the role minorities have played in the historical development of the United States from the earliest times to the present, with an emphasis on the twentieth century. The course begins with a study of racism, followed by the history and cultural contributions of the American Indian and the African American. This course fulfills the American Institutions requirement for the Associate Degree. This course is intended for those who desire a better understanding of the history of minorities in the United States. This course also satisfies a course requirement for the AA-T in History for Transfer degree.

3 Units
54 Lecture hours

HIST 159
US Comparative History of Mexican and Asian Americans and Women
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
(*Students will receive credit for only one of the following courses: HIST 159 or HIST 159H)
This course surveys the roles selected minorities have played in the historical development of the United States from the earliest times to the present. Emphasis is placed on the history and cultural contributions of Mexican Americans, Asian Americans, and American women. This course is intended for those wishing to fulfill the American Institutions requirement for the Associate degree and CSU, and those who desire a better understanding of the history of minorities in the United States. This course is a restricted elective for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 158H
US Comparative History of Mexican and Asian Americans & Women Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
(*Students will receive credit for only one of the following courses: HIST 159 or HIST 159H)
This course surveys the roles selected minorities have played in the historical development of the United States from the earliest times to the present. Emphasis is placed on the history and cultural contributions of Mexican Americans, Asian Americans, and American women. This course is intended for those wishing to fulfill the American Institutions requirement for the Associate degree and CSU, and those who desire a better understanding of the history of minorities in the United States, and those wishing to take the Honors version. This course is a restricted elective for the History for Transfer (AA-T) degree. This course is intended for those who meet Honors Program requirements.

3 Units
54 Lecture hours

HIST 167
History of California
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course provides an overview of California history from the first aboriginal inhabitants to modern times. Cultural, political, social and economic development will be addressed in the context of history.

The development of contemporary institutions and the historical context of current issues will be addressed. This course is suitable for students seeking further understanding of California’s past and present, and those preparing for a career in teaching at the elementary level. It also satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 170
Women in American History
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a survey of the role, status, and contributions of women of different ethnic groups and social classes in American society from earliest times to the present, with an emphasis on the twentieth century. Special attention will be given to an understanding of how gender has shaped women’s options and expectations within the private and public spheres of society. This course is designed for the student who wants to learn more about women’s history in America and is recommended for all history majors. This course satisfies a course requirement for the History for Transfer (AA-T) degree.

3 Units
54 Lecture hours

HIST 299
Directed Study in History
Prerequisite: HIST 101 or 102 or 143 or 143H or 144 or 144H
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
The course provides an opportunity for the student to expand their studies in History beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.

1 to 3 Units
54 to 162 Lab hours

HIST 325
History of Science and Technology
Prerequisite: ENGL 201 or ENGL 201H, and HIST 101 or HIST 102 or HIST 143 or HIST 143H or HIST 144 or HIST 144H
This upper division General Education course is designed for students pursuing a Bachelor’s of Science degree in Automotive Technology but is also open to all students who have successfully completed the prerequisites. This course explores the history of science and technology from the initial understandings of the universe from Ptolemy and Aristotle, to the challenges brought by the scholars of the Scientific Revolution, to the modern innovators of scientific developments and advancements in technology. This course provides an overview of how individuals, societies, and nations were impacted by these developments and how science and technology impacts political, social, economic, and cultural changes over time. Since both science and technology are vital in the 21st century, this course aims to highlight the long history behind each from a global historical perspective.

3 Units
54 Lecture hours

**HOMELAND SECURITY**
Division of Public Safety

**HMLD 101**
Introduction to Homeland Security
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides first responders and other interested students with the foundational knowledge pertaining to homeland security. This course will include discussions on the policies, organizational relationships, and legal issues in the American context from federal, state and local municipal government perspectives.

3 Units
54 Lecture hours

**HMLD 102**
Introduction to Emergency Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides first responders and other interested students with the foundational knowledge pertaining to emergency management. This course will include discussions on the policies, organizational relationships, and legal issues in the American context from federal, state and local municipal government perspectives.

3 Units
54 Lecture hours

**HMLD 103**
Terrorism & Violence in Society
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course provides the student with an overview of the domestic and global issues related to terrorism and violence in society. This course includes an analysis of terrorism and violent extremism as an aggressive alternative for peaceful change and traditional warfare in the modern age. Students will also investigate the role economic, political and social factors play in determining patterns of terrorist activity, homegrown terrorism and violent extremism in society from a domestic and international level of analysis.

3 Units
54 Lecture hours

**HMLD 104**
Emergency Planning & Response
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is for students who desire to know about emergency planning and response. This course will cover emergency planning and response using the National Incident Management System (NIMS) and the Incident Command System (ICS) as part of the National Response Framework (NRF). The student will learn how the Nation responds to all types of disasters and emergencies. The student will also learn how the NRF’s flexibility is used in the public-private sector of the homeland security enterprise, inclusive of governmental agencies and regulatory and legal sources responsible for hazard mitigation. Application of the concepts learned will be applied to risk assessments and development of strategies and plans at the local, state, national and international levels of government.

3 Units
54 Lecture hours

**HMLD 105**
Hazard Mitigation in Emergency Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is an introduction to mitigation, one of the four core phases of emergency management. This course will cover the hazard planning process to assist students in mitigating or eliminating hazards from an all-hazard approach to emergency management. The student will also learn about the national framework used in the public-private sector of the homeland security enterprise, inclusive of governmental agencies and regulatory and legal sources responsible for hazard mitigation. Application of the concepts learned will be applied to risk assessments and the development of strategies at the local, state, national and international levels of government.

3 Units
54 Lecture hours

**HMLD 200**
Foundations of Critical Infrastructure Protection
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the student with an overview of the policies, strategies, and practical application of critical infrastructure security and resilience from an all-hazards perspective. Students will explore the contemporary risk environment and examine the challenges and opportunities associated with the following: public-private partnerships; information-sharing; risk analysis and prioritization; risk mitigation and management; performance measurement; incident management; and addressing future risks.

3 Units
54 Lecture hours

**HMLD 203**
Homeland Security: Leadership, Policy and Practice
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the student with an in-depth overview of the issues related to the leadership, policies and practices of homeland security in America and abroad. This course provides for the critical examination of the challenges facing the nation and the homeland security enterprise through detailed investigation of selected case studies from a leadership perspective. Students will analyze significant issues of homeland security from social, political, economic and cultural perspectives facing the nation. This course adds to the Homeland Security program with an in-depth study of the policies and practices affecting homeland security.

3 Units
54 Lecture hours

**HMLD 205**
Cybersecurity: Policy and Practice
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides the student with an overview of the domestic and global issues related to the poli-
cies and practices of cybersecurity in America. This course includes an analysis of the history of the Internet, the technological advances of internet based programs and the security of the cyber domain. Students will also investigate the role economic, political and social factors play in determining how cybersecurity will play a significant role in society from a domestic and international level of analysis.

3 Units
54 Lecture hours

HOSPITALITY
Division of Career & Technical Education

HOSP 101 (C-ID HOSP 100)
Introduction to the Hospitality Industry
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an overview of the hospitality industry with perspectives on customer service, operations, and career opportunities. Key industry segments are presented with close attention to service standards, trends and issues, the interrelationships between industry segments and the connections with the tourism industry.

3 Units
54 Lecture hours

HOSP 102 (C-ID HOSP 140)
Introduction to Hotel Operations
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to introduce students to the food and beverage industry and entry-level management of food and beverage operations. Focal areas include an overview of the food service industry, nutrition, menu pricing and food costs, types of food and beverage service, sanitation and safety, managing finances, and sustainability.

3 Units
54 Lecture hours

HOSP 104 (C-ID HOSP 130)
Introduction to Food and Beverage Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed to introduce students to the food and beverage industry and entry-level management of food and beverage operations. Focal areas include an overview of the food service industry, nutrition, menu pricing and food costs, types of food and beverage service, sanitation and safety, managing finances, and sustainability.

3 Units
54 Lecture hours

HOSP 201 (C-ID HOSP 150)
Hospitality Law
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
The course explores the legal relationship and considerations of hotel, restaurant, travel and tourism operations. Limiting personal and business exposure to liability and best practices for complying with requirements of the US legal system are emphasized. Topics include food and beverage liability, employee selection, common contracts, responsibilities to guests, and for guest property, safety and security, and Americans with Disabilities Act.

3 Units
54 Lecture hours

HUMAN SERVICES
Division of Behavioral & Social Sciences

HUSR 118
Chemical Dependency: Intervention, Treatment, and Recovery
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an introduction to current perspectives with respect to the management of chemical dependency. Through an examination of alcoholism as a model of drug dependence, the treatment of and recovery from such disorders will be explored from two divergent perspectives: the reformatory and the transformative. Current treatment modalities will be compared and contrasted in terms of their view of the individual in both the social and clinical context. The class experience itself will serve as an intervention by challenging students to examine their existing ideas about treatment and recovery from substance use disorders. Suitable for students interested in furthering their understanding of substance dependence and those interested in working with populations recovering from or at risk for such problems.

3 Units
54 Lecture hours

HUSR 120
Introduction to Rehabilitation Services
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
The purpose of this course is to provide students with an introduction to the field of rehabilitation services. This course presents an orientation to federal/state and private rehabilitation/community agencies, which are involved in facilitating the rehabilitation and treatment processes of individuals. A historical, philosophical, and social overview of rehabilitation counseling will be provided, as well as coverage of the private/state agencies and community support that assist people with disabilities. A wide variety of different issues related to the professions of rehabilitation will be discussed in detail. Students will learn to analyze the personal, social, and vocational implications of a dis-
ability in an individual’s participation in a community and their own lives.

3 Units
54 Lecture hours

HUSR 122
Introduction to Group Leadership and Process
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an introduction to the dynamics of group interaction. The individual’s firsthand experience is emphasized as the group studies itself under supervision. The factors involved in problems of communication, effective emotional responses, and personal growth will be highlighted. Group process will be examined as a means of changing behavior. Suitable for students interested in furthering their understanding of group dynamics and those interested in supervising groups dedicated to achieving behavioral change.

3 Units
54 Lecture hours

HUSR 123
Drug Education and Prevention
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students interested in furthering their understanding of substance dependence and those interested in working with populations recovering from or at risk for such problems. It addresses the history, theories, models, and approaches to substance abuse education and prevention. In addition to an academic look at drug abuse, students will also explore and examine their own values and beliefs about substance use and misuse. The impact of public policy, the media, and drug education programs on drug use will all be considered.

3 Units
54 Lecture hours

HUSR 124
Introduction to Case Management and Documentation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course introduces students to case management and documentation in a variety of settings. Students will study the purpose, function, and rationale for case management. In addition, the documentation of client clinical records will be covered, emphasizing the taking of social histories and the writing of treatment plans. The professional guidelines necessary for working with clients in a social services setting will also be covered, providing the student with an understanding of issues related to ethics, client rights, and confidentiality. This class is designed for students interested in working in a social services setting.

3 Units
54 Lecture hours

HUSR 126
Counseling the Family of the Addicted Person
Advisory: ENGL 035 OR ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an overview of the systems approach to counseling the chemically dependent family. Alcoholism will be used as a model for developing counseling skills through the analysis and examination of the relationships that develop in the addicted family system. An experiential format will be employed as students participate in exercises that lead to the development of the necessary skills. This course is designed for those working with or preparing to work with the drug dependent and those around them.

3 Units
54 Lecture hours

HUSR 128
Chemical Dependency and Co-Occurring Disorders
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course explores understanding mental illness and persons with more than one mental/psychiatric disorder. It introduces students to the various disorders in infancy, childhood, adolescence and adulthood. It will introduce students to co-existing disorders and various diagnosis and treatment techniques used to treat this unique population. Students will tour two different types of mental health facilities to provide an additional understanding of mental health issues.

3 Units
54 Lecture hours

HUSR 130
Essential Counseling Skills
Advisory: ENGL 035 OR ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course focuses on critical counseling skills and strategies within a multicultural context. The course provides a vital orientation to the helping process and the counseling profession. Current issues within the counseling profession, such as diversity and multiculturalism, are discussed and integrated throughout the course. A unique focus is given to the student’s growth and development as a counselor and how the student can best use supervision in this developmental process. This course would be of benefit to anyone working in a human service or social services setting.

3 Units
54 Lecture hours

HUSR 199A
Seminar in Human Services
Prerequisite: PSY 101 or SOC 101,
Corequisite: HUSR 199B
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
The corequisite courses HUSR 199A and 199B provide students with a supervised field experience in a community organization, agency, or institution, allowing the student to apply knowledge and learn new skills outside of the classroom environment. This course provides the academic element to this experiential course offering and reinforces the application of concepts gained in the prerequisite course or courses.

1 Unit
18 Lecture hours

HUSR 199B
Fieldwork in Human Services
Prerequisite: PSY 101 or SOC 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
The corequisite courses HUSR 199A and 199B provide students with a supervised field experience in a community organization, agency, or institution, allowing the student to apply knowledge and learn new skills outside of the classroom environment. In this course students take the theories and principles learned in the classroom and apply them to their work in a field setting. This course is designed to provide the student with an opportunity to develop skills that would facilitate gaining employment in the human services field.

Unpaid field work: 2 units = 120 hours; 3 units = 180 hours
Paid field work: 2 units = 150 hours;
3 units = 225 hours
2 to 3 Units
120 to 225 Other hours

HUSR 230A
Drug Studies Seminar
Prerequisite: HUSR 122, HUSR 124, HUSR 130
Corequisite: HUSR 230B
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU

382 / Rio Hondo College 2019-2020 Catalog
The corequisite courses HUSR 230A and 230B are designed be taken in the final semester of the Drug Studies Program and provide the student with work experience in a drug treatment facility. This seminar course is a companion to the internship experience and will focus on ethics, the further development of counseling skills, and the use of community resources. Concurrent enrollment in Human Services 230B.

1 Unit
18 Lecture hours

**HUSR 230B**

**Drug Studies Internship**

**Prerequisite:** HUSR 122, HUSR 124, HUSR 130

**Corequisite:** HUSR 230A

**Advisory:** ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

**Transfers to:** CSU

The corequisite courses HUSR 230A and 230B are designed be taken in the final semester of the Drug Studies Program and provide the student with work experience in a drug treatment facility. Through their internship work, students will apply the concepts and skills gained through their coursework as they serve as an intern in a setting where drug dependent individuals are served. Students must meet the requirements of the internship facility. Concurrent enrollment in Human Services 230A.

**Unpaid field work:** 2 units = 120 hours; 3 units = 180 hours

**Paid field work:**

- 2 units = 150 hours
- 3 units = 225 hours

**Student Unpaid Internship:**

- 120 hours

**Student Paid Internship:**

- 150 hours

- 2-3 Units

- 120 to 225 Other hours

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**HUMANITIES**

**Division of Behavioral & Social Sciences**

**HUM 111**

**Survey of Humanities**

**Advisory:** ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

**Transfers to:** UC, CSU

This course provides an interdisciplinary presentation of cultural forces, providing the student with a comprehensive view of the most vital artistic, literary, philosophical, religious, scientific and architectural movements within the Western, Eastern and Latin American traditions from the Renaissance to the 20th century. This course is intended for students who wish to further their understanding of major cultural developments around the world.

3 Units
54 Lecture hours

**HUM 125**

**Introduction to Mexican Culture**

**Advisory:** ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

**Transfers to:** UC (credit limit*), CSU

(*Students will receive credit for only one of the following courses: HUM 125 or HUM 125H)

This course provides an interdisciplinary presentation of vital artistic, literary, architectural, musical, political, religious and historical movements within Mexico spanning from Pre-Cortesian to contemporary times. This course is designed for students who wish to further their understanding of major Mexican cultural and historical developments.

3 Units
54 Lecture hours

**HUM 125H**

**Introduction to Mexican Culture Honors**

**Prerequisite:** ENGL 101

**Advisory:** READ 043 or appropriate placement

**Transfers to:** UC (credit limit*), CSU

(*Students will receive credit for only one of the following courses: HUM 125 or HUM 125H)

This course provides an interdisciplinary presentation of vital artistic, literary, architectural, musical, political, religious and historical movements within Mexico spanning from Pre-Cortesian to contemporary times. This course is designed for students who wish to further their understanding of major Mexican cultural and historical developments.

3 Units
54 Lecture hours

**HUM 130**

**Contemporary Mexican-American Culture**

**Advisory:** ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

**Transfers to:** UC, CSU

This course provides a contemporary interdisciplinary examination of the most vital Mexican-American literary, artistic, musical, theatrical, social, political and historical movements. This course is designed for students who wish to further their understanding of major Mexican-American cultural contributions to contemporary society.

3 Units
54 Lecture hours

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**JAPANESE**

**Division of Communications & Languages**

**JAPN 101**

**Japanese I**

**Advisory:** ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

**Transfers to:** UC, CSU

This course provides the student with an introduction to the Japanese language and culture. The course stresses oral and written proficiency through fundamental use of the Japanese language as well as the Hiragana and Katakana script. Students will also receive an introduction to Kanji characters. Various facets of Japanese history, culture and civilization will also be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory.
via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This course is intended for those interested in learning to speak Japanese, as well as for those seeking a degree in the Japanese language.

4.5 Units
72 Lecture hours
27 Lab hours

JAPN 102
Japanese II
Prerequisite: JAPN 101 or completion of 2 years high school Japanese with a grade of “C” or better
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is a continuation of the essentials of the Japanese Language. The course stresses oral and written proficiency through fundamental use of the Japanese language, as well as the Hiragana and Katakana script. Students will further their knowledge of Kanji characters. Various facets of Japanese history, culture and civilization will also be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This course is intended for those interested in learning to speak Japanese, as well as for those seeking a degree in the Japanese language.

4.5 Units
72 Lecture hours
27 Lab hours

JOURNALISM
Division of Communications & Languages

JOUR 110
Digital Photjournalism I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an introduction to students in the process of taking photographs using digital cameras, digital video cameras, and digital printing devices. Photocomposition, printing and scanning techniques using Photoshop for the use of publication, and other computer skills related to contemporary photojournalism will also be addressed. Assignments may include work for college publications. This class is recommended for students majoring in journalism or photography. Lab hours are required in addition to scheduled lecture hours.

3 Units
36 Lecture hours
54 Lab hours

JOUR 120 (C-ID JOUR 110)
Communications Reporting and Writing
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is an introduction to the writing and editing techniques used in the newspaper industry, with an emphasis on gathering information and the principles of clarity and conciseness. Students will use computers during class and lab times. This course is intended for students who are pursuing the Associate of Science Degree/Certificate of Achievement in Mass Communications with either Mass Media or Print Media Specializations.

3 Units
54 Lecture hours

JOUR 231
Digital Magazine Production
Prerequisite: ENGL 101
Advisory: GDSN 172, JOUR 120, READ 043 or appropriate placement
Transfers to: CSU
This course is designed to introduce students to the fundamentals of magazine writing, production, and editing. Students will learn the methods, techniques, and procedures of magazine publication using InDesign to layout magazine content. Students will also master the development of pre- and post-production of La Cima Magazine. Students will learn to develop story ideas, magazine content, write stories in magazine style, and learn to photograph for magazines. Students will learn to prepare for publication and design magazine pages. Class lectures will include magazine preparation, production, organization, structure, and operation. At the conclusion of the course students will have participated in the total development and production of a magazine(s) that will be published online using www.issuu.com, and printed on hard copy. Students will have also mastered the use of design layout, illustration, and making pages well-balanced.

3 Units
36 Lecture hours
54 Lab hours

JOUR 241 (C-ID JOUR 110)
Magazine Production
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course includes writing news, news features, profile features, commentary, and photography for publication in the college magazine, La Cima. Students will learn copy-editing, layout/computer design, Photoshop, digital photography, and advertising fundamentals through the process of writing, editing and laying out the college magazine.

3 Units
36 Lecture hours
54 Lab hours

JOUR 220
Advanced Reporting and Writing
Prerequisite: JOUR 120
Transfers to: CSU
This course is designed to meet lower division requirements for journalism majors which are transferable to four-year institutions. JOUR 220 is a continuation of JOUR 120 with an emphasis on improvement of basic skills. This course concentrates on writing and editing of more advanced news and feature stories, factual forms for newspapers and further study of the laws of journalism. Students will study methods of preparing material intended for publication in print and online editions of newspapers.

3 Units
54 Lecture hours

JOUR 230
Magazine Production
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course includes writing news, news features, profile features, commentary, and photography for publication in the college magazine, La Cima. Students will learn copy-editing, layout/computer design, Photoshop, digital photography, and advertising fundamentals through the process of writing, editing and laying out the college magazine.

3 Units
36 Lecture hours
54 Lab hours

JOUR 147
Broadcast News
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is for students interested in writing for radio and television and is an introduction to the principles and techniques of broadcast news with special reference to the gathering and writing of news for radio and telephone, script writing, interviewing, and the procedures and techniques of presenting the news for broadcast. Each student will be assigned to write, direct, edit, and oversee the production of a video broadcast for the college’s digital newspaper during the semester.

3 Units
36 Lecture hours
54 Lab hours

JOUR 240 (C-ID JOUR 130)
Newspaper Production I
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is intended for students wanting to learn production and management techniques for a college
newspaper. Students will participate in every facet of developing a newspaper for the college community by serving as staff writers, staff photographers, editors and layout personnel. Students will publish the college newspaper, El Paisano, during the semester by having weekly assignments for different sections of the paper such as: News, Features, Arts and Entertainment, Opinion, Advertising and Sports. In addition students may be taking photos for special Focus pages. Editors will be responsible for designing their sections of the newspaper on days designated by deadline of the publication by using Quark Express and Photoshop.

4 Units
36 Lecture hours
108 Lab hours

JOUR 242 (C-ID JOUR 130) Digital Newspaper Production I
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Advisory: JOUR 241
Transfers to: CSU
This course is intended for students wanting to learn the production and management techniques of the college newspaper El Paisano as an online publication. Students will participate in every facet of developing and gathering the news for the online edition of El Paisano during the semester by having daily and weekly assignments for different sections of the newspaper such as: News, Features, Arts and Entertainment, Opinion, Advertising, and Sports. In addition students may be taking photos for special slide shows online, developing and producing Radio Podcasts online and developing and producing Video News and Feature programs online. Editors will be appointed and will give out assignments to staff personnel during the semester and help with the development of each member of the class to produce viable online news.

4 Units
36 Lecture hours
108 Lab hours

JOUR 243 (C-ID JOUR 131) Newspaper Production II
Prerequisite: JOUR 241
Advisory: READ 043 or appropriate placement; JOUR 120
Transfers to: CSU
This course is intended for students to continue in the production of El Paisano, the campus newspaper, and earn their degree in either Journalism and/or Mass Communications with a specialization in print media. Students will write, produce, layout pages, copy edit, and sell advertisements. They will also design pages and advertisements using InDesign, Photoshop, and other editing software. Students will also acquire production skills in formatting and file conversions for print media. Students will be expected to serve in leadership roles and cover on and off campus news. Lab hours are required in addition to scheduled lecture hours.

4 Units
36 Lecture hours
108 Lab hours

JOUR 244 (C-ID JOUR 131) Digital Newspaper Production II
Prerequisite: JOUR 242
Transfers to: CSU
This course is designed for students furthering their career into the digital realm. Students will be able to work hands-on with the multitude of media platforms digital news production brings via El Paisano Online, www.elpaisanoonline.com. Students will produce content for all online aspects of the digital newspaper, such as, podcasting, broadcasting, news segments, and writing for the masses while implementing the video component to all stories. At the conclusion of the course, students will have the concept of immediacy for online news while keeping the reader engaged. Lab hours are required in addition to scheduled lecture hours.

4 Units
36 Lecture hours
108 Lab hours

JOUR 290 Cooperative Work Experience/Internship for Journalism Related Fields
Prerequisite: JOUR 120, JOUR 241, ENGL 101
Transfers to: CSU
This course supports and reinforces on-the-job training in journalism related fields under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in an area of journalism related fields and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose intended job is related to the field of journalism and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures”

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours

1 to 4 Units
3 Lecture hours
60 to 300 Other hours

JOUR 299 Directed Study: Journalism
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance with Title V regulations with one unit of credit awarded for 34 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units
54 to 162 Lab hours

KINESIOLOGY

THEORY

Division of Kinesiology, Dance, and Athletics

KIN 058 Yoga Teaching Training I: Foundations
Prerequisite: KINA 158
Corequisite: KINA 158
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement
This course includes foundational information necessary for those intending to teach Hatha Yoga. The student who successfully completes this course with the co-requisite one lab practicum and KINA 258 Yoga II will fulfill one half, or 100 hours required for the Yoga Alliance RYS 200 Certification. The first of a sequential two-part series, Yoga Teacher Training I: Foundations will focus on establishing a personal practice in combination with an experiential analysis of the foundational
KIN 115
Fitness Specialist Internship
Prerequisite: Instructor approval
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course will provide students with practical experience in the field of exercise and fitness. Emphasis is placed on participant screening, evaluation, fitness assessment, exercise program design, nutrition education, self-marketing, social media, fitness specialist/client relationships and professional responsibility in a fitness setting. This course is designed for the student pursuing a career in the fitness industry, a certificate in the Fitness Specialist Program, as well as those interested in furthering their understanding of the effects of exercise on the mind and body. Instructor approval is required for enrollment.
2 Units
18 Lecture hours
54 Lab hours

KIN 112
Nutrition for Sport and Fitness
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU
This course provides an overview of the role of nutrition to increase energy and enhance performance. Nutrient needs before, during, and after exercise are evaluated for their effect on optimal health. Carbohydrate loading, popular diets and supplementation are discussed. This course is designed for the student pursuing a career in the fitness industry, a certificate in the proposed Fitness Specialist Program, as well as those interested in furthering their understanding of the effects of nutrition on the mind and body.
3 Units
54 Lecture hours

KIN 116
Principles of Strength and Conditioning
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU
This course is designed to include the necessary information needed for those intending to teach strength and conditioning. The course covers anatomy and physiology, biomechanics, training adaptations, exercise and equipment selection, training techniques, program design, and safety factors. This course is designed for the student pursuing a career in the fitness industry, a certificate in the Fitness Specialist Program, or those interested in furthering their understanding of the effects of exercise on the body and mind.
3 Units
54 Lecture hours

KIN 117
Exercise Physiology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement
Transfers to: CSU
This course provides an overview of how the body functions under conditions of exercise stress and how fitness training affects health and wellness. Emphasis will be placed on muscular, cardiovascular, respiratory, bioenergetics, and other physiological processes that are affected by exercise. The effects of various diseases will also be addressed. This course is designed for the student pursuing a career in the fitness industry, a Certificate in the Fitness Specialist Program, or those interested in furthering their understanding of the effects of exercise on the body and mind.
3 Units
54 Lecture hours
KIN 145
Theory and Analysis of Fitness Instruction
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
Transfers to: CSU
This course provides an introduction to the principles and techniques involved in teaching group exercise and developing a personal trainer/client relationship. Emphasis is placed on client assessment, communication skills, program design, exercise adherence, teaching strategies, and professional responsibility and liability. This course is designed for the student pursuing a career in the fitness industry, a certificate in the Fitness Specialist Program, as well as those interested in furthering their understanding of the effects of exercise on the mind and body.
2 Units
36 Lecture hours

KIN 146
Training Principles for Special Populations
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
Transfers to: CSU
This course provides an overview of the exercise implications for special populations related to age, medical condition and level of fitness. Emphasis is placed on cardiac conditions, diabetes, physical disabilities, HIV and AIDS, asthma, sensory impairments, seniors, children, mentally impaired and pregnant and postpartum women and the issues and barriers to exercise. This course is designed for the student pursuing a career in the fitness industry, a certificate in the Fitness Specialist Program, as well as those interested in furthering their understanding of the effects of exercise on the mind and body.
2 Units
36 Lecture hours

KIN 157
Theory of Lifeguard Training and Water Safety
Prerequisite: Swim 300 yards continuously; Tread water for two minutes using only the legs; Complete timed swimming, submersion and retrieval event; Swim at American Red Cross Learn-to-Swim Level 4 Proficiency.
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
Transfers to: CSU
“(*The UC will grant a maximum of 8 units credit for PE Theory courses)
The purpose of this course is to explore the impact that coaches have on athletic programs in the community. This course is designed for all students interested in coaching individual and team sports. The course will cover topics such as role of the coach, athlete motivation, coaching leadership, coaching work teams, coaching technology, and effective coaching practice. At the end of the course, students will have a more understanding of the effects of exercise on the mind and body.
3 Units
54 Lecture hours

KIN 159
Leadership Empowerment of Sport
Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement.
Transfers to: UC (credit limit)*.
“(*The UC will grant a maximum of 8 units credit for PE Theory courses)
The purpose of this course is to explore leadership theories and the impact of leadership empowerment through sport. This course is designed for all students interested in leadership dynamics within individual and team sports. The course will cover topics such as leadership theories, self-awareness, informal and formal leadership, emotional intelligence theory, athlete motivation, team dynamics, communication and the role of the team captains. At the end of the course, students will have more insight into leadership within sport environments.
3 Units
54 Lecture hours

KIN 188
Theory and Practice of Coaching
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
Transfers to: CSU
“(*The UC will grant a maximum of 8 units credit for PE Theory courses) The purpose of this course is to explore the impact that coaches have on athletic programs in the community. This course is designed for all students interested in coaching individual and team sports. The course will cover topics such as role of the coach, athlete motivation, coaching leadership, coaching work teams, coaching technology, and effective coaching practice. At the end of the course, students will have a more understanding of the effects of exercise on the mind and body.
3 Units
54 Lecture hours

KIN 191
Health: Personal Issues
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
Transfers to: UC (credit limit)*.
“(*The UC will grant a maximum of 8 units credit for PE Theory courses) This course is designed for all students that are physically active and interested in learning how to improve and maintain their personal health. Topics covered include the general health principles, nutrition and diet, physical fitness, stress management, sexuality and reproduction, drug/alcohol use and abuse, consumer and safety issues and the process of death. Students learn how to develop sound health principles through text readings, lectures, assignments/labs and guest speakers.
3 Units
54 Lecture hours

KIN 192
Health: Women’s Personal Health
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
Transfers to: UC (credit limit)*.
“(*The UC will grant a maximum of 8 units credit for PE Theory courses) This course is designed for students pursuing a career working with the public and for those who want to further their understanding of handling emergency situations. The student will learn how to give immediate care to the suddenly injured or ill person. In addition, students will learn techniques for control of bleeding, splinting, transporting victims, emergency procedures, one person C.P. R. and

KIN 193 (C-ID KIN 101)
Standard First Aid and CPR
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
Transfers to: UC (credit limit)*.
“(*The UC will grant a maximum of 8 units credit for PE Theory courses) This course is designed for students pursuing a career working with the public and for those who want to further their understanding of handling emergency situations. The student will learn how to give immediate care to the suddenly injured or ill person. In addition, students will learn techniques for control of bleeding, splinting, transporting victims, emergency procedures, one person C.P. R. and

2019-2020 Catalog
Rio Hondo College / 387
the use of an AED. Students will have the opportunity to apply these technical procedures in class. This course fulfills the requirements for American Red Cross certifications in both Standard First Aid and Cardiopulmonary Resuscitation (C.P.R.) and Automatic Defibrillation (AED).

3 Units
54 Lecture hours

KIN 194 (C-ID KIN 100)
Introduction to Kinesiology
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: CSU
This course is designed for those students who are interested in pursuing a career in the field of kinesiology. The philosophy, history, ethical and scientific foundations of kinesiology will be covered. The concepts of basic movement and performance movement in relationship to kinesiology will be examined. Students will explore the sub-disciplines of motor learning, biomechanics, exercise physiology, sport sociology, sport psychology, and sport nutrition. Professional career opportunities in health/fitness, therapeutic exercise, teaching, coaching and sport management will be examined. The challenges for kinesiology, future of kinesiology, sport and health/wellness are also addressed.

3 Units
54 Lecture hours

KIN 195
Social Issues/Media in Sport
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students who are interested in pursuing a career in the field of coaching and athletics. This class will study the controversies and the status of sport in our society. Coaching methodologies and future trends in athletics, physical activities, and physical education/kinesiology will be discussed. This class will examine the relationship between sport and media, social media, culture and the economy. An emphasis will be placed on understanding the historical and current roles of sport in society.

3 Units
54 Lecture hours

KIN 196
Health: Fitness and Wellness
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(“The UC will grant a maximum of 8 units credit for PE Theory courses)
This course is designed for all students who are interested in learning the value of life-long, healthy lifestyles. Students will be given the tools to assist them in making positive life-style changes based on a personal health/fitness profile. Topics covered include: basic anatomy and physiology, nutrition, weight control, tobacco and alcohol, muscle fitness, flexibility, stress reduction, cardiovascular functioning, health topics, disease entities, and preventive health care measures.

3 Units
54 Lecture hours

KIN 197
Prevention and Treatment of Athletic Injuries
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(“The UC will grant a maximum of 8 units credit for PE Theory courses)
This course introduces the basic concepts of athletic training, including instruction for prevention, recognition, management and treatment of common injuries in a physically active population. The skills of basic strapping, bracing, padding and taping for the prevention and support of injuries will be presented and practiced. This class is recommended for those interested in becoming a Certified Athletic Trainer.

3 Units
54 Lecture hours

KIN 198
Prevention and Treatment of Common Injuries
Advisory: ENGL 035 or ENLA 100 or appropriate placement; MATH 033 or MATH 033B or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
Prerequisite: KIN 197 and a current CPR card
This course supports and reinforces on-the-job training in the field of athletic training under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of athletic training and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours
3 Lecture hours
60 to 150 Other hours

KIN 199
Cooperative Work Experience/Internship for Athletic TrainingRelated Fields
Prerequisite: KIN 197 and a current CPR card
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
Prerequisite: KIN 197
This course introduces the advanced concepts of athletic training, including instruction for evaluation and rehabilitation of common athletic injuries. Advanced taping and bracing techniques will also be presented and practiced. This class is designed for students interested in becoming a Certified Athletic Trainer or those who are preparing for a career in any allied health care profession.

3 Units
54 Lecture hours

KIN 226
Advanced Training Principles for Sport and Tactical Athletes
Prerequisite: KIN 122, KIN 126, KIN 127, KIN 128
Advisory: ENGL 035 or ENLA 100 or appropriate placement; MATH 033 or MATH 033B or appropriate placement; READ 043 or appropriate placement;
Transfers to: UC (credit limit*), CSU
(“The UC will grant a maximum of 4 units credit for PE Activity courses)
This course is designed to include the necessary information needed for those intending to assess and teach strength training and performance skills to both sport and tactical athletes. The course covers anatomy and physiology, bioenergetics, biomechanics, training adaptations, physical assessments for strength, agility, power, speed, and quickness, program design, exercise and equipment selection, training techniques, and safety factors. This course is designed for the student pursuing a career in the strength and conditioning area, completing the Strength and Performance Coach Certificate.
KINESIOLOGY
Division of Kinesiology, Dance, and Athletics

For Dance courses – See Dance) Dance-activity courses may be used in place of P.E. activity courses to fulfill degree requirements.

Students may select several different courses or may enroll in a course and continue to the next level of the same course. Courses labeled “I” and “II” fall into the continued instruction category.

KINA 101
Tennis I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This is a beginning tennis class designed to take the student to a recreational level in skills. Instruction in the serve, groundstroke, volley, and rules are taught. The student will also learn how to play doubles and singles matches so that the student can compete on a recreational level.
1 Unit
54 Lab hours

KINA 102
Intercollegiate Baseball I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the student interested in competing in baseball at the collegiate level. Instruction will focus on the introduction of advanced drills in the area of offense, defense and pitching. Special attention will be placed on skill development and class participation in preparing students for intercollegiate competition. This course may be repeated three times for credit.
1 Unit
54 Lab hours

KINA 103
Softball I
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the beginning student who wishes to gain the fundamental skills of softball. It is designed to present the following skills to the student; throwing, batting, bunting and defense. Additionally, the individual field positions and the responsibilities of team work will be emphasized.
1 Unit
54 Lab hours

KINA 104
Volleyball I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is a beginning class designed to present the basic fundamental skills and rules of volleyball. The student will have the opportunity to learn and practice serving, setting, and spiking. The student will also participate in team play. This class is appropriate for students who have never played volleyball, are just learning the game or haven’t played for an extended period of time and want to refresh their skills.
1 Unit
54 Lab hours

KINA 105
Basketball I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This beginning level course designed for all students will provide instruction in the fundamentals of basketball such as dribbling, passing, shooting, team play, rebounding, defense and strategy. Collegiate rules, class competition, injury prevention and care, and proper diet and fitness needs are included in instruction. The emphasis will be on active participation, basketball as recreation and skill development within this team sport.
1 Unit
54 Lab hours

KINA 107
Badminton I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This is a beginning badminton class designed for the student to gain experience of various degrees of competitive play. Instruction in the serve, drive, drop, smash, clears, rules and court etiquette are taught so the student can perform at a competitive level.
1 Unit
54 Lab hours

KINA 108
Water Polo I
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This is a course in the fundamentals and skills of water polo such as passing, guarding, shooting, team play, and strategy. Rules and class competition are included.
1 Unit
54 Lab hours

KINA 109
Soccer I
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This is a beginning soccer/activity class designed for all students interested in developing the physical, technical and tactical elements of the game of soccer. The course will include fundamental skills of soccer which include, dribbling, passing, kicking, collecting and basic concepts of offensive and defensive tactics. Rules of the game, skill practice and participating in recreational soccer matches will be included.
1 Unit
54 Lab hours

KINA 110
Futsal (Indoor Soccer)
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This class will provide instruction and repetition in the technical and tactical components of Futsal (Indoor Soccer). The Federation of International Football Association (FIFA), which is the governing body of soccer in the world and the United States Soccer Federation (USSF), which is the governing body of soccer in the United States recognize Futsal as its own sport consisting of a smaller, fast-paced technical game. FIFA Futsal Laws of the Game will be introduced to the students. The course will develop skills, provide knowledge of the rules and instruct students to demonstrate Futsal techniques, recognize tactical situations and improve physical fitness.
1 Unit
54 Lab hours

KINA 113
Golf I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
Golf I is designed for the beginning golfer who wants to gain the
fundamental skills that form the basis of good golf technique. The goal of this class is for the student to learn to play a respectable game of golf, to avoid embarrassment, and to enjoy time outdoors with friends. Etiquette, rules and course play are included.

1 Unit
54 Lab hours

KINA 117
Self Defense
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is a beginning class designed to equip students with basic self-defense techniques through scenario and martial arts training. Through different forms of martial arts training, students will practice both defensive and offensive moves against various forms of attacks. Proficiency in the practical, effective, and tactical use of movement, leverage and strikes will be stressed.

1 Unit
54 Lab hours

KINA 120
Swim for Fitness
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
KINA 117
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This class is designed to provide the individual who has beginning swimming skills an opportunity to master the fundamentals of physical fitness as they relate to swimming as an aerobic activity. Emphasis will be placed on aerobic training with some training at the anaerobic threshold and anaerobic levels. This class is suitable for all students interested in swimming as a fitness activity.

1 Unit
54 Lab hours

KINA 124
Self Defense
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This course is designed for all students interested in developing both personal safety and self-defense techniques through scenario and martial arts training. Through different forms of martial arts training, students will practice both defensive and offensive moves against various forms of attacks. Proficiency in the practical, effective, and tactical use of movement, leverage and strikes will be stressed.

1 Unit
54 Lab hours

KINA 130
Lifelong Fitness Laboratory
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This 45-hour, self-paced physical fitness laboratory is designed for all students of the college to develop and encourage positive attitudes and habits with regards to health-related fitness components, including cardiovascular fitness, flexibility, and muscular strength and endurance. Each student, upon entry, will be assessed for risk factors and medical history, as well as body composition, cardiovascular fitness, muscular strength and endurance, and flexibility to establish an individual fitness profile. From this profile, an individual exercise prescription will be developed. Fitness activity will primarily utilize exercise equipment organized into an aerobic super circuit with additional activity prescribed in the aerobic machine area, body parts weight training area, and flexibility area. It is expected that the student will attend an average of three 30 minute exercise sessions each week. Additional assessment at the conclusion of the semester will provide data necessary to evaluate the accomplishment of stated goals. Offered on a credit/no credit basis.

1 Unit
54 Lab hours

KINA 132
Aqua Aerobics
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfer to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the student who wishes to improve their cardiovascular and core fitness. The student will learn lifelong skills to improve their health. Workout skills such as core strengthening, cardiovascular fitness, step aerobics and flexibility training will be covered. Instruction in proper diet, heart rate monitoring, skills proficiency and fitness program planning will be provided to each student.

1 Unit
54 Lab hours

KINA 133
Wrestling I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This wrestling class is designed for the beginner as well as for the student who wishes to increase their knowledge and skill through practice and competition. It is designed to present the following skills to the student: escapes, pinning combination take-downs, and strategies. The student will learn basic definitions, terminology and rules of wrestling. This class will include information on proper nutrition and fitness conditioning.

1 Unit
54 Lab hours

KINA 134
Cardio Boot Camp
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the student who wishes to improve their cardiovascular and core fitness. The student will learn lifelong skills to improve their health. Workout skills such as core strengthening, cardiovascular fitness, step aerobics and flexibility training will be covered. Instruction in proper diet, heart rate monitoring, skills proficiency and fitness program planning will be provided to each student.

1 Unit
54 Lab hours

KINA 136
Pilates Mat I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)
This course introduces students to the basic Pilates floor exercises, which are designed to increase strength in the abdominal and spinal musculature. Students will engage in activities and exercises designed to increase awareness of body alignment, increase strength in the torso, spine and limbs, increase endurance, learn breathing techniques to utilize in strength training exercises, increase coordination, improve balance, and will learn about the muscle groups and their actions being utilized during traditional Pilates mat work. This course is suitable for students interested in conditioning, dance, Hatha Yoga, athletics,
and individuals seeking to increase strength to better support the spine in everyday activities.

1 Unit  
54 Lab hours

KINA 139  
Cross Training for Fitness  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement

Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)

This cross-training course is designed for the beginning through advanced student who wishes to increase their cardiovascular fitness level through a variety of aerobic and anaerobic activities. It is designed to present the following skills to the student: running, cycling, swimming, interval training, and introduction to weight training. Additionally, the student will learn basic definitions and terminology of the current fitness arena, assisting them with fitness as a life-long process using a variety of cardiovascular mediums.  
1 Unit  
54 Lab hours

KINA 140  
Walking for Fitness  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement

Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)

This course is designed to meet the needs of daily physical exercise for life long fitness and health. Walking is one of the safest and most effective forms of exercise to improve health, and develop and maintain physical fitness. The course provides cardiovascular conditioning through the activity of walking. Instruction in proper diet, heart rate monitoring, skill proficiency and fitness program planning will be provided to each student. This class is designed for students who are interested in starting an exercise program, or developing an active lifestyle.  
1 Unit  
54 Lab hours

KINA 147  
Off-Season Conditioning for Intercollegiate Sports  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement

Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)

This course is designed for all students preparing for specific physical fitness related to off-season intercollegiate athletic participation. The purpose of the course is to develop a level of physical fitness, strength and conditioning that will enhance the athlete’s ability to be successful in intercollegiate competition. This course may be repeated three times for credit.  
1 Unit  
54 Lab hours

KINA 148  
Strength Training  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement

Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)

This course is designed for students who would like to learn the basic fundamentals of strength and conditioning. Students will be introduced to a variety of routines that will enable them to develop a personal exercise plan.  
1 Unit  
54 Lab hours

KINA 151  
Strength and Conditioning for Intercollegiate Athletics  
Advisory: Experience in college athletics, high school varsity athletics or equivalent is recommended; READ 043 or appropriate placement

Transfers to: CSU

This course is designed for any student preparing to compete on an intercollegiate team. This is an advanced course designed for the student-athlete to improve all of their fitness levels through a variety of strength, flexibility, aerobic and anaerobic activities, and technology. The specific demands of the sport will be addressed by the intercollegiate athlete during the off-season and in-season periodization training techniques specific to each sport. The purpose of the course is for the student-athlete to understand and develop a high level of physical fitness, strength and conditioning that will enhance the athlete’s ability to be successful in intercollegiate competition. This class may be taken once for credit and repeated three times.  
1 Unit  
54 Lab hours

KINA 158  
Yoga I  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement

Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)

This course is designed for the beginning student who would like to learn the fundamental physical Asanas (poses) of Hatha Yoga as well as Pranayama (breathing techniques) and Dhyana (meditation techniques). The goal of the course is to integrate the mind, body, and spirit and to give the student tools to better manage stress, alleviate physical tensions, and encourage optimum fitness. In this introductory course, students learn proper physical alignment in the standing poses (Sun Salutation Series A-C, Warrior 1-2, Downward Dog, Upward Dog, Cobra, Triangle, Crescent), the floor poses (Staff, Lotus, Cobbler, Twists, Backbends), and in elementary inversions (Inverted Leg Rest, Headstand Preparation, Wall-Dog Preparation).  
1 Unit  
54 Lab hours

KINA 170  
Women’s Intercollegiate Basketball Team  
Advisory: READ 022 or appropriate placement

Transfers to: UC (credit limit*), CSU (*The UC will grant a maximum of 4 units credit for PE activity courses)

This is an advanced course designed for students who will be competing at the collegiate level in the sport of women’s basketball. This class is offered for 11 consecutive weeks to run concurrent with the intercollegiate basketball season as determined by the CCCAA governing body. Students will be required to spend a minimum of 7.36 hours a week for 11 weeks preparing for competition with other colleges. This course may be repeated three times for credit.  
1.5 Units  
81 Lab hours
KINA 171
Women's Intercollegiate Tennis Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of women's tennis. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 172
Women's Intercollegiate Volleyball Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of women's volleyball. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 173
Women's Intercollegiate Softball Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of women's softball. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 174
Women's Intercollegiate Soccer Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of women's soccer. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 175
Women's Intercollegiate Wrestling Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of men's wrestling. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 176
Men's and Women's Intercollegiate Swim Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of swimming. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 177
Men's Intercollegiate Baseball Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of men's baseball. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours

KINA 178
Men's and/or Women's Intercollegiate Water Polo Team
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of men's and women's water polo. Students will be required to spend a minimum of 10.125 hours a week preparing for competition with other colleges. This course may be repeated three times for credit.
3 Units
162 Lab hours
competition with other colleges. This course may be repeated three times for credit.
1 Unit
54 Lab hours
KINA 201
Tennis II
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement; KINA 101
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an intermediate tennis class designed to take the student beyond recreational skills. Advanced instruction in the serve, groundstrokes, volley, and playing strategy is given. The lob and smash are introduced.
1 Unit
54 Lab hours
KINA 202
Intercollegiate Baseball II
Advisory: KINA 102
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the advanced baseball student interested in competing at the collegiate level. Instruction will focus on advanced drills in the area of offense, defense and pitching. Special attention will be placed in preparing students for intercollegiate competition. This course may be repeated three times for credit.
1 Unit
54 Lab hours
KINA 203
Off Season Softball
Advisory: KINA 103
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the advanced softball student competing at the collegiate level. Instruction will focus on advanced drills in the area of offense, defense and pitching. Special attention will be placed in preparing students for intercollegiate competition. This course may be repeated three times for credit.
1 Unit
54 Lab hours
KINA 204
Volleyball II
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; KINA 104
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for intermediate volleyball students who have previously played volleyball and are looking to improve their skill and knowledge of the game. Students will develop the intermediate skills of setting, serving, passing, spiking, team defense of 6-1, 5-1 and defensive coverage. Rules and class competition are included.
1 Unit
54 Lab hours
KINA 205
Basketball II
Prerequisite: KINA 105 or instructor approval for admission
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the intermediate to advanced basketball player who wants advanced level basketball development. Students will participate in full court team play, receive advanced instruction on strategies, offensive and defensive skills and concepts, analyze intercollegiate and professional game film and learn intercollegiate and professional rules.
1 Unit
54 Lab hours
KINA 206
Off Season Women's Intercollegiate Volleyball Training
Prerequisite: Participation in Intercollegiate Athletics
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the advanced volleyball student interested in competing at the collegiate level. Instruction will focus on advanced techniques in serving, passing, setting, hitting, plus jump serving, jump set, jump attack, various defensive patterns and team play training and conditioning. Special attention will be placed in preparing students for intercollegiate competition. This course may be repeated three times for credit.
1 Unit
54 Lab hours
KINA 207
Badminton II
Prerequisite: KINA 107 or instructor approval for admission
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement;
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an intermediate level badminton class designed for the student to develop the ability to make appropriate responses (relative on their own abilities) to the particular problems posed by the game. Advanced instruction is given in the basic strokes as well as the introduction of Indonesian serve, around-the-head shot, hairpin and flick shot.
1 Unit
54 Lab hours
KINA 209
Soccer II
Prerequisite: KINA 109
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This advanced soccer activity class is designed for all students interested in developing the physical, technical and tactical elements of the game of soccer. The course will include analysis of fundamental skills, game strategy, team offense and team defense through participation and an overview of rules. This is an advanced soccer class designed to take the student beyond recreational skills. Team tactics, strategies and systems of play will be emphasized.
1 Unit
54 Lab hours
KINA 210
Futsal (Indoor Soccer) II
Advisory: KINA 110
Transfers to: CSU
This advanced/intermediate futsal activity class is designed for all students interested in developing the physical, technical speed and elements of the game of futsal. The course will include game strategy, analysis of fundamental skills, offensive and defensive tactics through small group numbers. Strategies and transitional play will be emphasized.
1 Unit
54 Lab hours
KINA 211
Off Season Intercollegiate Tennis
Prerequisite: Participation in Intercollegiate Sports
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for the advanced tennis student interested in competing at the collegiate level. Instruction will focus on transitional play will be emphasized. Small group numbers. Strategies and transitional play will be emphasized.
1 Unit
54 Lab hours

2019-2020 Catalog
Rio Hondo College / 393
KINA 213
Golf II
Prerequisite: KINA 113
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
Golf II is designed for the intermediate to advanced golfer who wants to take their golf game beyond basic fundamentals. Every year thousands of people choose golf as their favorite sports activity. Once learned, golf becomes an enjoyable lifetime recreation. Golf II students will build on the skills learned in Golf I. A major portion of class time is spent on the golf course applying the techniques learned in Golf I.
1 Unit
54 Lab hours

KINA 217
Swimming II
Advisory: READ 043 or appropriate placement; KINA 117
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an intermediate class designed to provide the individual with the opportunity to learn the elements of good swimming. Students will sharpen their technique in the basic strokes learned in Swim I. Basic components of distance training will be covered along with conditioning methods. Safety and rescue skills are also included.
1 Unit
54 Lab hours

KINA 218
Swimming III
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced swimmer’s class designed to provide the individual with the opportunity to master the coordination of six swimming strokes in order to swim effectively with ease, endurance, and versatility in the water. More advanced safety and rescue skills are also included.
1 Unit
54 Lab hours

KINA 230
Lifelong Fitness Center II - Cardiovascular Fitness
Prerequisite: KINA 130 or PE 130
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 020 or MATH 020C or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This class is a course designed to give the student skills and information to improve their own cardiovascular fitness. This class will involve instruction and practice in techniques that will promote cardiovascular fitness: running, jump rope, core training, aerobic activity, aerobic circuit and resistance bands. The student will learn about the importance of blood pressure, heart rate and diet in relation to cardiovascular disease.
1 Unit
54 Lab hours

KINA 258
Yoga II
Prerequisite: KINA 158
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This course is designed for intermediate students who would like to advance their physical asanas (poses) of Hatha Yoga as well as Pranayama (breathing techniques) and Dhyana (meditation techniques). The goal of the course is to integrate the mind, body, and spirit and to further challenge the students in their physical practice by increasing sustainment, perfecting alignment, and by incorporating twists and wraps. Parivrtta Trikonasana, Prasarita Padottanasana, Malasana, Garudasana, Natasajasana, Uthita Hasta Padangustasana, Chaturanga Dandasana, Purvottanasana, Navasana, Virasana, Ustrasana, Matsyasana, Sarvangasana, Surya Namaskar B will be covered in depth during the course.
1 Unit
54 Lab hours

KINA 270
Women’s Intercollegiate Basketball Team II
Prerequisite: KINA 170
Advisory: READ 022 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*The UC will grant a maximum of 4 units credit for PE activity courses)
This is an advanced course designed for students who will be competing at the collegiate level in the sport of women’s basketball during conference and post season play. This class is offered for 11 consecutive weeks to run concurrent with the intercollegiate basketball season as determined by the CCCAA governing body. Students will be required to spend a minimum of 7.36 hours a week for 11 weeks preparing for competition with conference colleges. This course may be repeated three times for credit.
1.5 Units
81 Lab hours

LANDSCAPE
Division of Career & Technical Education

LAND 101
Introduction to Landscape Design & Maintenance
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; ENGT 101
Transfers to: CSU
This introductory landscape design course is designed for the non-scientist and specifically for the amateur garden enthusiast interested in learning landscape design from a landscape professional. The course is a general overview of landscape design which include topics of landscape design, planting and irrigation design, plant identification, cost analysis, and maintenance. The class sessions are a combination lecture, hands-on planting and irrigation design lessons and plant identification. A field trip to a local nursery or demonstration garden is planned for the semester.
3 Units
45 Lecture hours
27 Lab hours

LAND 102
Introduction to Landscape Architecture & Design
Prerequisite: ENGT 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; ENGT 105
Transfers to: CSU
This introductory course is for students interested in the field of Landscape Architecture or Landscape Design. Fundamental principles and concepts essential to landscape...
design development will be introduced through lectures, readings, discussions, field trips, and assignments. Natural and human determinants that shape the landscape will be explored in addition to the study of the theory, history, and role of the landscape architecture profession in environmental design.

4 Units
54 Lecture hours
54 Lab hours

LAND 103
Landscape Architecture Theory and Form
Prerequisite: LAND 102
Advisory: ENGL 035 or ENLA 100 or appropriate placement; ENGT 105
Transfers to: CSU
This is a continuation course to LAND 102, Introduction to Landscape Architecture and Design. This course expands upon fundamental landscape design principles and concepts. The course examines theory and methods pertaining to landscape architecture design and site planning. Study and design of landscape will be conducted from small local scale to larger regional scale through in-class assignments, multi-week projects, model-making, and readings. Comprehension of topography and design of landform through 2D and 3D model studies will also be included.

4 Units
54 Lecture hours
54 Lab hours

LAND 299
Directed Study in Landscape Design
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Landscape Design beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.

1 to 3 Units
54 to 162 Lab hours

LATIN
Division of Communications & Languages

LATN 101
Latin I
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
Latin I introduces students to the classics, enhances their understanding of basic grammar, exposes them to authentic pronunciation, increases their knowledge of vocabulary derivatives, and acquaints them with Roman history and culture. This class is designed for students who plan to major in Classics, History, Philosophy, or Languages and would also be important for those going into law, medicine, and other fields where Latinate terminology is common.

3 Units
54 Lecture hours

LATN 102 (C-ID ENGL 120)
Approaches to Literature
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
("Students will receive credit for only one of the following courses: LIT 102 or LIT 102H"

This course is designed for students who wish to study the four general literary forms: poetry, drama, short story, and novel. Emphasis will be placed on critical thinking, critical reading, and composing. Compositions will be based upon discussion, analysis and interpretations of lit-
Honors American Literature through 1865

LIT 112AH (C-ID ENGL 130)

Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement

This course is designed for students who wish to study the four general literary forms: poetry, drama, short story, and novel. Emphasis will be placed on critical thinking, critical reading, and composing. Compositions will be based upon discussion, analysis, and interpretations of literature, and upon the relationship of Western and Non-Western literature to contemporary thought. This course is intended for students eligible for the Honors Program.

3 Units
54 Lecture hours

American Literature through 1865

LIT 112B (C-ID ENGL 135)

Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement

This course explores a range of American literature, with a focus on major texts and writers from the early settlement to 1865. Representative writers include Bradstreet, Bradford, Franklin, Douglass, Paine, Lincoln, Emerson, Thoreau, Poe, Melville, and Dickinson. Course reading and writing assignments explore major cultural and historical themes, including the pre-colonial exploration of the Americas, Native American literary contributions, the Revolutionary and Civil Wars, transcendentalism, and romanticism. This course is designed for students interested in exploring various genres of literature, students interested in learning more about cultural expression in the Americas, and students majoring in English or liberal studies. This course is designed for students eligible for the honors program.

3 Units
54 Lecture hours

American Literature after 1865

LIT 112BH (C-ID ENGL 135)

Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement

This course is an introduction to children's and adolescent literature in its three general literary forms: the short story (including myths, legends, fairy tales, and folk tales), the novel, and poetry. Stress is placed upon critical thinking, critical reading, and composing. This course will explore works of children's literature from ancient times to the present, analyze the literary elements of these works, assess their value for both children and adults, and examine the historical periods and cultural environments in which they were written, including but not limited to Asian, Latino, Native American, and African cultures. This course is beneficial for English majors, students planning to transfer to a university, parents, and future elementary and secondary teachers.

3 Units
54 Lecture hours
This course is designed for students eligible for the honors program.
3 Units
54 Lecture hours

**LIT 117**

**Mexican Literature in Translation**

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

*Transfers to: UC, CSU*

This course explores a range of Mexican literature in English translation, with a focus on major literary influences and achievements from the pre-Hispanic era to the twentieth century. Course reading and writing assignments explore indigenous literatures and myths, chronicles of the Spanish conquest, literature of the colonial period, high culture and folklore of the eighteenth century, political and modernist literature of the nineteenth century, and poetry and prose of the twentieth century. This course is designed for students interested in exploring various genres of literature, students interested in learning more about Mexican cultural expression, and students majoring in Chicano Studies.

3 Units
54 Lecture hours

**LIT 117H**

**Mexican Literature in Translation Honors**

*Prerequisite: ENGL 101*

*Advisory: READ 043 or appropriate placement*

*Transfers to: UC, CSU*

This course explores a range of Mexican literature in English translation, with a focus on major literary influences and achievements from the pre-Hispanic era to the twentieth century. Course reading and writing assignments explore indigenous literatures and myths, chronicles of the Spanish conquest, literature of the colonial period, high culture and folklore of the eighteenth century, political and modernist literature of the nineteenth century, and poetry and prose of the twentieth century. This course is designed for students interested in exploring various genres of literature, students interested in learning more about Mexican cultural expression, and students majoring in Chicano Studies. This course is intended for students eligible for the honors program.

3 Units
54 Lecture hours

**LIT 130**

**Women and Literature**

*Prerequisite: ENGL 035 or ENLA 100 or appropriate placement*

*Advisory: READ 043 or appropriate placement*

*Transfers to: UC, CSU*

This course explores women writers, their lives, the roles they play in culture and society, and how they have influenced the world. Students will examine topics such as female authorship, literary influence, the evolution of technique, the effects of race and class, and the historical and cultural environments in which works were written, including but not limited to American, British, Asian, Hispanic, Native American, and African cultures. Stress is placed on critical thinking, critical reading, and composing. Feminist, literary, and political theory will be explored. Special emphasis may be placed on a period, genre, theme, or literary grouping. This course is beneficial for English majors, students planning to transfer to a university, and anyone interested in learning about women and literature.

3 Units
54 Lecture hours

**LIT 130H**

**Women and Literature Honors**

*Prerequisite: ENGL 101*

*Advisory: READ 043 or appropriate placement*

*Transfers to: UC, CSU*

This course explores women writers, their lives, the roles they play in culture and society, and how they have influenced the world. Students will examine topics such as female authorship, literary influence, the evolution of technique, the effects of race and class, and the historical and cultural environments in which works were written, including but not limited to American, British, Asian, Hispanic, Native American, and African cultures. Stress is placed on critical thinking, critical reading, and composing. Feminist, literary, and political theory will be explored. Special emphasis may be placed on a period, genre, theme, or literary grouping. This course is beneficial for English majors, students planning to transfer to a university, and anyone interested in learning about women and literature. This course is intended for students eligible for the honors program.

3 Units
54 Lecture hours

**LIT 140**

**Introduction to the Novel**

*Prerequisite: ENGL 035 or ENLA 100 or appropriate placement*

*Advisory: READ 043 or appropriate placement*

*Transfers to: UC, CSU*

(*Students will receive credit for only one of the following courses: LIT 140 or LIT 140H)*

This course introduces students to a variety of approaches to the novel. Course readings will focus on novels selected from different historical periods and within a variety of cultural traditions. Students will gain an understanding of the features that distinguish the novel as a literary genre: narrative structure, point of view, character development, setting, theme, style, imagery and symbol. This course is designed for students interested in learning more about literary expression and students intending to major in a literary or arts-related field of study.

3 Units
54 Lecture hours

**LIT 140H**

**Introduction to the Novel Honors**

*Prerequisite: ENGL 101*

*Advisory: READ 043 or appropriate placement*

*Transfers to: UC (credit limit*), CSU*

(*Students will receive credit for only one of the following courses: LIT 140 or LIT 140H)*

This course introduces students to a variety of approaches to the novel. Course readings will focus on novels selected from different historical periods and within a variety of cultural traditions. Students will gain an understanding of the features that distinguish the novel as a literary genre: narrative structure, point of view, character development, setting, theme, style, imagery and symbol. This course is designed for students interested in learning more about literary expression and students intending to major in a literary or arts-related field of study. This course is intended for students eligible for the honors program.

3 Units
54 Lecture hours

**LIT 141**

**Introduction to Poetry**

*Prerequisite: ENGL 035 or ENLA 100 or appropriate placement*

*Advisory: READ 043 or appropriate placement*

*Transfers to: UC, CSU*

This course introduces students to a variety of approaches to poetry. Course readings will include poems on diverse topics representing the fundamental modes, historical periods, and cultural traditions. Students will gain an understanding of the features that distinguish poetry as a literary genre, including techniques of sound, tropes and figurative language, and thematic development. The course is appropriate for both English majors and those students who wish to expand their knowledge and appreciation of poetry.

3 Units
54 Lecture hours
LIT 142
Introduction to Shakespeare
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who wish to increase their knowledge and appreciation of Shakespeare's art, his life and times, and his exploration of the human condition. The major works of Shakespeare are explored in the context of the dramatic genre, the Elizabethan theater, and the social, religious, and political milieu of Renaissance England. Representative tragedies, comedies, histories, romances, poetry, and the sonnet cycle are studied.
3 Units
54 Lecture hours

LIT 142H
Introduction to Shakespeare Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who wish to increase their knowledge and appreciation of Shakespeare's art, his life and times, and his exploration of the human condition. The major works of Shakespeare are explored in the context of the dramatic genre, the Elizabethan theater, and the social, religious, and political milieu of Renaissance England. Representative tragedies, comedies, histories, romances, poetry, and the sonnet cycle are studied. This course is intended for students eligible for the Honors Program.
3 Units
54 Lecture hours

LIT 143
Exploring Authors
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This one-unit course is designed for students who would like the opportunity to study the literary works of one author in depth. Students will compare and contrast the author's works in class discussions and in essay form. Students should consult the class schedule for the author selection as it varies each semester. This course may be taken once and repeated two times for credit. This course is designed for students eligible for the Honors Program.
1 Unit
18 Lecture hours

LIT 144A (C-ID ENGL 140)
World Literature: Antiquity through the 16th Century
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course introduces students to a wide range of world literature from antiquity, the Middle Ages, and the Renaissance. Although the emphasis is on continental literature and Western civilization, the course may include significant works from African, Asian, Middle Eastern, and/or Latin American traditions. Course reading and writing assignments emphasize literary periods and literary history, the different genres of literary expression, and literature as a reflection of major cultural events and beliefs. This course is designed for students interested in learning more about literary expression and students intending to major inecary or arts-related field of study.
3 Units
54 Lecture hours

LIT 144B (C-ID ENGL 145)
World Literature: 16th Century to Present
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course introduces students to a wide range of world literature from the seventeenth century to the present. Although the emphasis is on continental literature and Western civilization, the course may include significant works from African, Asian, Middle Eastern, and/or Latin American traditions. Course reading and writing assignments emphasize the European Enlightenment, romanticism, realism, modernism, and literature as a reflection of major cultural events and beliefs. This course is designed for students interested in learning more about literary expression and students intending to major in a literary or arts-related field of study. LIT 144A need not be taken before LIT 144B.
3 Units
54 Lecture hours

LIT 145
Introduction to the Short Story
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: LIT 145 or LIT 145H)
This course is designed for students interested in exploring short fiction from a variety of different periods and traditions in order to increase appreciation, understanding, and enjoyment of its various forms and techniques. Students will compare and contrast authors' works in writing and class discussion. The course emphasizes the short story as a genre from the Nineteenth century to the present.
3 Units
54 Lecture hours

LIT 145H
Introduction to the Short Story Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: LIT 145 or LIT 145H)
The course is designed for students interested in exploring short fiction from a variety of different periods and traditions in order to increase appreciation, understanding, and enjoyment of its various forms and techniques. Students will compare and contrast authors' works in writing and class discussion. The course emphasizes the short story as a genre from the Nineteenth century to the present. This course is designed for students eligible for the honors program.
3 Units
54 Lecture hours

LIT 146A (C-ID ENGL 160)
British Literature through 1785
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who are interested in learning about British literature from the Old English period to the beginning of the nineteenth century. The following major British writers will be discussed: Chaucer, Spenser, Shakespeare,
Bacon, Donne, Milton, Dryden, Swift, Pope, Johnson, Boswell, Fielding, and others.

3 Units
54 Lecture hours

LIT 146AH (C-ID ENGL 160)
British Literature through 1785 Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who are interested in learning about British literature from the beginning of the Old English period to the beginning of the nineteenth century. The following major British writers will be discussed: Chaucer, Spenser, Shakespeare, Bacon, Donne, Milton, Dryden, Swift, Pope, Johnson, Boswell, Fielding, and others. This course is designed for students eligible for the Honors Program.

3 Units
54 Lecture hours

LIT 146B (C-ID ENGL 165)
British Literature after 1785
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students interested in learning about British literature written from the beginning of the nineteenth century to the present. The following major British writers will be discussed: Austen, Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Arnold, Shaw, Yeats, Eliot, and others.

3 Units
54 Lecture hours

LIT 146BH (C-ID ENGL 165)
British Literature after 1785 Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students interested in learning about British literature written from the beginning of the nineteenth century to the present. The following major British writers will be discussed: Austen, Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Arnold, Shaw, Yeats, Eliot, and others. This course is designed for students eligible for the Honors Program.

3 Units
54 Lecture hours

LIT 147
Cinema as Literature
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is for students interested in learning about the aesthetics of film making, especially with regard to adaptation of literature to the cinematic medium. Films will be analyzed and evaluated according to their historical, social, cultural, aesthetic, and technical significance. Both American and international film making will be covered.

3 Units
54 Lecture hours

LIT 147H
Cinema as Literature Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is for students interested in learning about the aesthetics of filmmaking, especially with regard to adaptation of literature to the cinematic medium. Films will be analyzed and evaluated according to their historical, social, cultural, aesthetic, and technical significance. Both American and international filmmaking will be covered. This course is designed for students eligible for the honors program.

3 Units
54 Lecture hours

LIT 148
Introduction to Dramatic Literature
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course introduces students to a wide range of dramatic literature, from the plays of ancient Greece to contemporary drama. Students will study plays from representative literary periods and dramatists such as Sophocles, Christopher Marlowe, Moliere, Chekhov, Tennessee Williams, Samuel Beckett, Susan Glaspell, Lorraine Hansberry, Arthur Miller, Luis Valdez, August Wilson, and/or others chosen by the instructor. Course reading and writing assignments emphasize dramatic form and structure, the aesthetics of drama, and drama as a reflection of major cultural events and beliefs. This course is designed for students interested in a detailed exploration of a specific genre of literature, students intending to major in a literary or arts-related field of study, and students intending to enter the teaching profession.

3 Units
54 Lecture hours

LIT 149
Introduction to Chicana/Chicano Literature
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course explores a range of Chicana/Chicano literature, with a focus on major texts from 1848 to the present. Course reading and writing assignments explore major cultural themes, including identity issues. Assigned readings may be from a variety of genres including essays, poetry, fiction, oral histories, corridos, and autobiography by writers throughout the Southwest. This course is designed for students interested in exploring various genres of literature, students interested in learning more about Chicana/o cultural expression, and students majoring in Chicano Studies.

3 Units
54 Lecture hours

LIT 299
Directed Study: Literature
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units
54 to 162 Lab hours
LOGISTICS
Division of Business

LOG 101
Supply Chain Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. The course presents the tools and techniques for the design and improvement of supply chain, through the optimal use of information, materials, and technology to improve efficiency and reduce costs. The student will examine the processes for planning, sourcing, making, delivering, and returning products in order to integrate suppliers and customers into an organization’s supply chain. The student will receive an overview of career opportunities within the logistics and supply chain management field.
3 Units
54 Lecture hours

LOG 105
Purchasing Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 101
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. This course explores the basic purchasing functions including establishing purchasing requirements and quantities, developing purchasing policies and procedures, receiving acceptable goods, arranging for packaging and shipping, managing inventory control, and the integration of the purchasing activities with other business functions.
3 Units
54 Lecture hours

LOG 110
Warehouse Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 101
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. This course provides the essential skills for warehouse managers, with emphasis on the planning, protection, productivity, and quality control functions in warehouse and distribution operations. Topics include warehouse design and layout, effective communications, industry terminology, technology, distribution systems, inventory management and protection, accountability, auditing, and safety rules and regulations. This course is intended for students seeking a career in logistics or supply chain management.
3 Units
54 Lecture hours

LOG 115
Inventory Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 101
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. The course reviews the concepts and techniques available for planning and controlling inventories. The student will examine methods to determine the appropriate amount of inventory to carry; the relationship between inventory as a physical asset and an accounting asset; the difference between raw material, work-in-process, and finished goods inventories; controlling the physical locations of inventory; recognizing and analyzing inventory dysfunctions; bar code technologies; and protecting inventory from natural, technological, and man-made disasters.
3 Units
54 Lecture hours

LOG 120
Transportation Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 101
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. The course provides a study of traffic management principles and techniques that facilitate distribution of the world’s commerce. Topics covered in the course include analysis of the major forms of transportation, such as motor, rail, air, water, pipeline, inter-modal, and international; the integration of transportation forms into a distribution system; carrier management and selection, including rate structures, scheduling, outsourcing, private fleet operations, and transportation customers; government regulations on tariffs; and transportation of hazardous materials.
3 Units
54 Lecture hours

LOG 125
Contract Management
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 101
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. The course provides a study of the legal and regulatory requirements applicable to contracts for product transportation and logistics functions and considerations for drafting and negotiating contracts with freight carriers, warehousemen and other logistics service providers.
2 Units
36 Lecture hours

LOG 130
Computerized Logistics
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 115
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. The course provides a study of the need and use of computers in the supply chain and logistics industry and an introduction to the software that is available, such as enterprise resource planning, demand planning, and warehouse management.
3 Units
54 Lecture hours

LOG 135
Quality Management Concepts
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement; CIT 051; LOG 105
Transfers to: CSU
This course is intended for students seeking a career in logistics or supply chain management. The course provides a study of the basic principles, objectives, and policies of a quality management program. Topics include the implementation of continuous quality improvement and the understanding of the various quality philosophies, such as Deming’s 14 points, process management, ISO 9000 certification, Six Sigma efforts, the Baldrige award criteria, and an introduction to statistical process control.
3 Units
54 Lecture hours
MGMT 101 (C-ID BUS 110)  
**Introduction to Business**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 050 or MATH 050D or MATH 053 or appropriate placement*  
*Transfers to: UC, CSU*  
This course is designed for the student who is considering a career in business. Topics cover business operations, strategies for both, domestic and international markets, economic factor, legal regulations, management, leadership, marketing, financial operations, accounting controls, and e-commerce. This course will count toward a business certificate or degree in business and will transfer to a four-year school.  
3 Units  
54 Lecture hours

MGMT 105  
**Elements of Supervision**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101*  
*Transfers to: CSU*  
This course is designed for the student who is seeking a career in management or is currently in a leadership role and wants a better understanding of human relation skills and techniques. Topics covered in the course include leadership, teamwork, communication, group problem-solving, diversity, motivation, and managerial organizations. These topics will apply to both a diverse and competitive environment.  
3 Units  
54 Lecture hours

MGMT 120  
**Human Relations in Business**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101*  
*Transfers to: CSU*  
This course is designed for the student who is seeking a career in management or is currently in a leadership role and wants a better understanding of human relation skills and techniques. Topics covered in the course include leadership, teamwork, communication, group problem-solving, diversity, motivation, and managerial organizations. These topics will apply to both a diverse and competitive environment.  
3 Units  
54 Lecture hours

MGMT 125  
**Managerial Computer Applications**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101*  
*Transfers to: CSU*  
This course provides students with an introduction to computer technology as it applies to the business management environment. Course curriculum has been designed to prepare managers to leverage current technology, in both theory and application, to meet the needs of the global business environment. Managerial issues and ethical standards are explored along with web-based hands-on modules which prepare students to become proficient in MS Word, MS Excel, and MS PowerPoint.  
3 Units  
54 Lecture hours

MGMT 130  
**Small Business Management-Entrepreneurship**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101*  
*Transfers to: CSU*  
This course is designed for those students interested in small business, either in a domestic or international market. Topics include start-up methods and techniques, management and operations, marketing, financing and cash management, location strategies, personnel practices, buying and selling strategies, and e-commerce. This course will also provide students with an opportunity to develop a business plan as it pertains to their small business interest.  
3 Units  
54 Lecture hours

MGMT 140  
**Introduction to International Business**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
*Transfers to: CSU*  
This course is designed to provide students with a global perspective of business and acquaint students with the relationship of culture, politics, laws, and economics to operation in today’s complex global business environment. The subjects covered will include international trade and finance, confidentiality and privacy, international marketing, and international human resources management. This course is designed for students looking for entry-level positions in the field of international business.  
3 Units  
54 Lecture hours

MGMT 141  
**International Marketing**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement*  
*Transfers to: CSU*  
This course is designed to provide students with an in-depth study of international marketing. International market opportunities and the determination of marketing objectives will also be explored. The students will evaluate the marketing research data and analyze selected approaches that affect the marketing mix for specific markets to coordinate strategies in global world markets. This course is designed for the marketing-oriented students and those interested in furthering their knowledge and understanding of international business.  
3 Units  
54 Lecture hours

MGMT 142  
**International Management**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement*  
*Transfers to: CSU*  
This course is designed to provide students with a comprehensive overview of the management practice as it relates to international business. An emphasis will be placed on the planning, problem solving, organizational structure, human resource management, and production management as it relates to international competition. These functions of management will all be evaluated and examined under international competitive situations and cross cultural boundaries. This course is designed for international business majors and those interested in furthering their knowledge of business culture, strategy and behavior issues in the global context.  
3 Units  
54 Lecture hours

MGMT 143  
**Import and Export Business**  
*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*  
This course is designed to provide students with a global perspective of business and acquaint students with the relationship of culture, politics, laws, and economics to operation in today’s complex global business environment. The subjects covered will include international trade and finance, confidentiality and privacy, international marketing, and international human resources management. This course is designed for students looking for entry-level positions in the field of international business.  
3 Units  
54 Lecture hours
Principles of Management
MGMT 150

Human Resources Management
MGMT 146

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

International Banking and Finance
MGMT 144

This course is designed for the student who is seeking a career in management or for the student who needs to expand his/her knowledge of management techniques and organizational methods. In this course, students will learn the theory and application of managerial functions as it applies to planning, organizing, leading, and controlling organizations. Additional topics to be covered will include the history of management, and practical management techniques, practices, and problem solving methodologies. The topics of employee empowerment, characteristics and qualities of successful managers, and contemporary trends in management will also be explored in this course.

3 Units
54 Lecture hours

MGMT 290
Cooperative Work Experience/Internship for Business Management Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course supports and reinforces on-the-job training in business and industrial establishments under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of Business Management and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”

Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours

Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.

1 to 4 Units
3 Lecture hours
60 to 300 Other hours

MGMT 155
Principles of Leadership
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is intended for professionals who want to develop an understanding of leadership principles. The course explores the differences between leadership and management, the approaches used to define leadership, and methods used to assess leadership behavior. Various instruments for assessing leadership are examined and discussed. Other topics examined include leadership in teams and leadership of change initiatives.

3 Units
54 Lecture hours

Advisory: ENGL 035 or ENLA 100 or appropriate placement

This course is designed to provide students who want to start or expand their own import and export business or professionals who seek to enter their career advancement and to do business overseas successfully. The course covers major practical applications, from understanding the objectives of parties involved in importing and exporting to the basics of letters of credit, packaging, transporting and shipments, role of banks and freight forwarders, foreign currency management, and documents used in international trade.

3 Units
54 Lecture hours

MGMT 208 (C-ID BUS 115)
Business Communications
Prerequisite: ENGL 101
Transfers to: CSU

This course covers the principles of effective writing in business. Extensive experience is provided using the different forms of business writing – memorandums, letters, reports, and resumes. Cultural differences and their impact on communicating in business will be studied. This course satisfies the business communications component for the Associate in Science in Business Administration for Transfer Degree.

3 Units
54 Lecture hours

Independent Study/Management
Transfers to: CSU

Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals.

Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

3 to 5 Units
54 to 162 Lab hours
**MARKETING**  
Division of Business  

**MRKT 170**  
Principles of Marketing  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101  
Transfers to: CSU  
This course is designed for the student who is interested in a career in marketing or gaining an entry-level marketing position with a retail, industrial, service, or consumer product company. Discussion of marketing concepts, strategies, and techniques will take place in an environment that reflects new technologies and international competitiveness. The topics in the course will include marketing concepts, functions, operations, and organizations of retail and wholesale enterprises; distribution channels; market research; advertising; marketing costs; pricing; cooperative marketing, marketing legislation and regulations and trends.  
3 Units  
54 Lecture hours  

**MRKT 171**  
Consumer Behavior  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101  
Transfers to: CSU  
This class investigates and analyzes the reasons why consumers select, purchase, use, and dispose of goods and services to satisfy their personal and household needs. Topics to be explored include consumer culture, group influence, consumption patterns, and consumer attitudes and lifestyles as well as other relevant topics. This class is appropriate for the marketing major and anyone who wants to know why people buy.  
3 Units  
54 Lecture hours  

**MRKT 172**  
Advertising and Promotion  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101  
Transfers to: CSU  
This course is designed to introduce students to the creative and competitive field of advertising and promotion. Course content includes understanding the target audience, developing marketing and advertising plans, engaging in the creative process through strategy and execution, and integrating marketing communications elements as they relate to personal selling, sales promotion, direct marketing, and electronic, digital, and print media. This course is appropriate for the marketing major or anyone interested in advertising and promotion.  
3 Units  
54 Lecture hours  

**MRKT 173**  
Principles of Selling  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: CSU  
This course is designed for the student interested in a sales position or those currently in the sales field needing further training or hoping to transition to a management or marketing manager position. The course will focus on relationship selling and developing productive selling environments. In addition, prospecting techniques, approach strategies, presentation and demonstration skills, overcoming selling objections, and closing techniques will provide the core of the material covered in this course.  
3 Units  
54 Lecture hours  

**MRKT 174**  
Small Business Marketing and Advertising  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101  
Transfers to: CSU  
This class provides useful and effective marketing and advertising tools and techniques to those students who have or would like to own a small business. A special emphasis is placed on the fundamentals of marketing and guerrilla marketing and advertising techniques. Topics for discussion will include marketing plan strategies, marketing research, marketing channel management, retail and pricing strategies, and cost-effective guerrilla advertising techniques for small businesses.  
3 Units  
54 Lecture hours  

**MRKT 175**  
Retail Management  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MGMT 101  
Transfers to: CSU  
This course is designed for the student pursuing a career in retail management or desiring to own their own retail business. Class discussions will explore the topics of customer buying behavior, retail market strategy, retail site location, and human resources management. Case studies and experiential exercises will be used to help students understand additional topics including customer service, store management, retail pricing, supply chain management, and merchandise management.  
3 Units  
54 Lecture hours  

**MASS**  
Division of Communications & Languages  

**MSCM 103**  
Survey of Motion Picture, Radio and Television  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC (credit limit*), CSU  
(*Students will receive credit for only one of the following courses: MSCM 103 or MSCM 128)  
This course presents a broad survey of the history, theory, aesthetic principles, and production techniques used in the making of motion pictures, radio, and television programs. Students will view or listen to numerous television shows, motion pictures, films, and radio programs in order to become familiar with various production techniques and methods of critically evaluating media presentations. Guest lecturers and field trips to film, TV shows, and radio studios may be scheduled.  
3 Units  
54 Lecture hours  

**MSCM 128**  
(C-ID JOUR 100)  
Mass Media in Modern Society  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
Transfers to: UC (credit limit*), CSU  
(*Students will receive credit for only one of the following courses: MSCM 103 or MSCM 128)  
This course in mass media surveys the history, format, laws, and significant contributors in American mass communications. Through projects and readings, students research and discuss such issues as free press, fair trial, foreign communications systems, and the relationship between free media and a democratic society.  
3 Units  
54 Lecture hours  

**MSCM 134**  
Documentary Film  
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement  
Transfers to: UC, CSU  
This is an inquiry into the origin, purpose, development, and current trends of the documentary (non-fiction) film. The class will view and...
critique the great documentaries ranging from Nanook of the North to Woodstock. The future of the medium in business, government, education, and television will also be discussed.

3 Units
54 Lecture hours

MATHEMATICS
Division of Mathematics, Sciences, and Engineering

MATH 003
Mathematics Acceleration
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course surveys a variety of mathematical topics needed to help students thrive in college-level mathematics courses. It is a partially software-based study program which uses an online learning system to permit focused whole-class instruction, and may also involve individualized and/or small group instruction as needed. The course reviews selected topics from the Common Core State Standards domains of Number and Quantity, Algebra, Geometry, Statistics and Probability, Functions, and Modeling, and emphasizes material that must be mastered for success in college-level mathematics courses. This is a non-degree applicable course offered on a pass-no pass basis.
1 Unit
18 Lecture hours

MATH 015E
Essential Topics for Quantitative Reasoning in Today’s World
Corequisite: MATH 150
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This support course is designed to develop the mathematical knowledge and study skills necessary for successful completion of Math 15: Quantitative Reasoning in Today’s World. Topics from intermediate algebra and geometry are covered to build a foundation for college-level quantitative reasoning. Strategic reading, critical thinking and problem-solving are incorporated to build the strategies needed to solve contextualized problems. Topics in the area of study skills and metacognition are also included to support students in a college-level math course. This is a non-degree applicable course offered on a pass-no pass basis.
2 Units
36 Lecture hours

MATH PATHWAYS
Consult with a counselor before choosing a path. The math course selected will be determined by your college major.

It is essential for students to consult with a counselor on what classes to take at Rio Hondo College.
If you have any questions or concerns, please visit the First Year Success in LR101 (Learning Resource Center) or by calling (562) 908-3410.
Please see a Counselor if you took the Advance Placement (AP) exam and your score was 3, 4, or 5 or took a college class at another college. Please request transcripts from College Board to be mailed to Rio Hondo College Admissions and Records Office.
MATH 016E
Essential Topics for Pre-Calculus
Corequisite: MATH 160
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This support course is designed to develop the mathematical knowledge and study skills necessary for successful completion of Math 160: College Algebra. Students must be concurrently enrolled in a College Algebra course to take this support course. Topics from intermediate algebra are covered to build a foundation for success in college-level algebra. Strategic reading, critical thinking, and problem-solving are incorporated to build the strategies needed to solve contextualized problems. Topics in the area of study skills and metacognition are also included to support students in a college-level math course. This is a non-degree applicable course offered on a pass-no pass basis.
1 Unit
18 Lecture hours

MATH 017E
Essential Topics for Plane Trigonometry
Corequisite: MATH 175
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This support course is designed to develop the mathematical knowledge and study skills necessary for successful completion of Math 175: Plane Trigonometry. Students must be concurrently enrolled in a trigonometry course to take this support course. Topics from intermediate algebra are covered. Strategic reading, critical thinking and problem-solving are incorporated to build the strategies needed to solve contextualized problems. Topics in the area of study skills and metacognition are also included to support students in a college-level math course. This is a non-degree applicable course offered on a pass-no pass basis.
1 Unit
18 Lecture hours

MATH 018E
Essential Topics for Pre-Calculus
Corequisite: MATH 180
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This support course is designed to develop the mathematical knowledge and study skills necessary for successful completion of pre-calculus (Math 180). Students must be concurrently enrolled in a section of MATH 180 to take this support course. Topics from intermediate algebra and trigonometry are covered to build a foundation for college-level quantitative reasoning. Strategic reading, critical thinking and problem-solving are incorporated to build the strategies needed to solve contextualized problems. Topics in the area of study skills are also included to support students in a college-level math course. This is a non-degree applicable course offered on a pass-no pass basis.
1 Unit
18 Lecture hours
no background in algebra. See MATH 030 for more information.
1 Unit
18 Lecture hours

MATH 030D
Prealgebra D
Prerequisite: MATH 030C
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is designed primarily for students who know the fundamentals of arithmetic, and have had little or no background in algebra. See MATH 030 for more information.
1 Unit
18 Lecture hours

MATH 033
Mathematical Foundations
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
This course combines topics from both Basic Math and Prealgebra, including operations with whole numbers, integers, fractions, decimals, rates, ratios, and proportional thinking, percent problems and applications to percents, and an introduction to algebraic thinking using fundamental principles of expressions and solving linear equations. This course serves as a foundational course for all students. students must pass MATH 033A in order to register for MATH 033B. Students must complete MATH 033A and MATH 033B within a maximum period of 24 months.
2.5 - Units
45 - Lecture hours

MATH 049
Introduction to MESA
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This standalone one-unit course is designed for students entering the Mathematics, Engineering, Science Achievement (MESA) and/or TRIO Student Support Services STEM Program. The course will introduce the student to the Science-Technology-Engineering-Mathematics (STEM) career paths, transfer and graduation requirements, effective STEM study skills, priority and time management, as well as the importance of participating in internships and appropriate extracurricular activities. Students are expected to be concurrently enrolled in at least one mathematics or science course in order to apply skills covered in this course.
1 Unit
18 Lecture hours

MATH 050
Elementary Algebra
Prerequisite: MATH 030 or MATH 030D or MATH 033 or appropriate placement
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is designed primarily for those students who have no prior training in algebra or need a review of the fundamentals of algebra. See MATH 050 for more information.
1 Unit
22.5 Lecture hours

MATH 050A
Elementary Algebra A
Prerequisite: MATH 030 or MATH 030D or MATH 033 or appropriate placement
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is an introduction to the basic principles and skills of algebra. It is designed primarily for those students who have no prior training in algebra or need a review of the fundamentals of algebra. See MATH 050 for more information.
1 Unit
22.5 Lecture hours

MATH 050B
Elementary Algebra B
Prerequisite: MATH 050A or appropriate placement
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is an introduction to the basic principles and skills of algebra. It is designed primarily for those students who have no prior training in algebra or need a review of the fundamentals of algebra. See MATH 050 for more information.
1 Unit
22.5 Lecture hours

MATH 050C
Elementary Algebra C
Prerequisite: MATH 050B or appropriate placement
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is an introduction to the basic principles and skills of algebra. It is designed primarily for those students who have no prior training in algebra or need a review of the fundamentals of algebra. See MATH 050 for more information.
1 Unit
22.5 Lecture hours

MATH 050D
Elementary Algebra D
Prerequisite: MATH 050C or appropriate placement
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is an introduction to the basic principles and skills of algebra. It is designed primarily for those students who have no prior training in algebra or need a review of the fundamentals of algebra. See MATH 050 for more information.
1 Unit
22.5 Lecture hours
MATH 053
B-STEM Elementary Algebra
Prerequisite: MATH 030 or MATH 030D or MATH 033 or appropriate placement
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
This course is designed for students who need to learn the fundamentals of algebra. It is designed primarily for students who plan to major in Business, Science, Technology, Engineering, or Math (B-STEM). This course consists of topics including solutions and graphs of linear equations and inequalities, slopes of lines, systems of linear equations and applications, operations with polynomials, including factoring and solving quadratic equations. 5 Units 90 Lecture hours

MATH 053A
B-STEM Elementary Algebra - A
Prerequisite: MATH 030 or MATH 030D or MATH 033 or MATH 033B or appropriate skill level as determined by participation in the math placement process.
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
This course is the first half of a modularized version of MATH 053. This course is designed for students who need to learn the fundamentals of algebra. It is designed primarily for students who plan to major in Business, Science, Technology, Engineering, or Math (BSTEM). This course consists of topics including solutions and graphs of linear equations and inequalities, and slopes of lines. Students must pass MATH 053A in order to register for MATH 053B. Students must complete MATH 053A and MATH 053B within a maximum period of 24 months. 2.5 - Units 45 - Lecture hours

MATH 053B
B-STEM Elementary Algebra - B
Prerequisite: MATH 053A
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
This course is the second half of a modularized version of MATH 053. This course is designed for students who need to learn the fundamentals of algebra. It is designed primarily for students who plan to major in Business, Science, Technology, Engineering, or Math (BSTEM). This course consists of topics including systems of linear equations and applications, operations with polynomials including factoring and solving quadratic equations. Students must pass MATH 053A in order to register for MATH 053B. Students must complete MATH 053A and MATH 053B within a maximum period of 24 months. 2.5 - Units 45 - Lecture hours

MATH 060
Geometry
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement
Advisory: ENGL 030 or ENLA 024 or appropriate placement; READ 043 or appropriate placement
This course is an introduction to the elements of geometry, including points, lines, planes, and angles. These elements are used in conjunction with triangles, polygonal and circular figures in both two and three dimensional configurations. Formulas for computing lengths, areas, and volumes are presented through the use of applications. This course is intended for students who have not had or completed two semesters of high school geometry or who need a refresher prior to taking trigonometry, technology courses, mathematics for elementary teachers or other courses with a geometry prerequisite. 3 Units 54 Lecture hours

MATH 062
Pre-Statistics
Prerequisite: MATH 030 or MATH 030D or MATH 033 or MATH 033B, or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement
This course surveys a variety of mathematical topics needed to prepare students for college-level statistics. Topics include: data analysis using ratios, rates, and proportional reasoning, graphical and tabular displays of data, measures of central tendency and spread, computing probabilities, describing associations of two variables graphically, graphing equations of lines and linear models, and solving linear equations and inequalities. Pre-Statistics is designed for students in majors, such as those in liberal arts, humanities, and social sciences. It should not be taken by students majoring in science, technology, engineering, math or business. This course does not satisfy the math requirement for an AA/AS degree at Rio Hondo College. 5 Units 90 Lecture hours

MATH 070
Intermediate Algebra
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B, or MATH 053A and MATH 053B
Transfers to: CSU if taken prior to the Fall Semester, 1988
This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college level transferable course. This course is intended for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college level transferable course. See MATH 070 for more information. 1 Unit 22.5 Lecture hours

MATH 070A
Intermediate Algebra A
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement
This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college level transferable course. Students must pass MATH 070AB in order to register for MATH 070CD 2 Units 45 Lecture hours

MATH 070AB
Intermediate Algebra: Part I
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B, or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement
This course is the first half of a modularized version of MATH 070. This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a transferable course that requires the skills obtained in intermediate algebra. This course consists of topics including real numbers, linear equations and inequalities, systems of linear equations and inequalities, polynomials and factoring. Students must pass MATH 070AB in order to register for MATH 070CD 2 Units 45 Lecture hours
MATH 070B
Intermediate Algebra B
Prerequisite: MATH 070A or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU if taken prior to the Fall Semester, 1988
This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college-level transferable course. See MATH 070 for more information.
1 Unit
22.5 Lecture hours

MATH 070C
Intermediate Algebra C
Prerequisite: MATH 070B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU if taken prior to the Fall Semester, 1988
This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college-level transferable course. See MATH 070 for more information.
1 Unit
22.5 Lecture hours

MATH 070CD
Intermediate Algebra: Part II
Prerequisite: MATH 070AB
This is the second half of a modularized version of the MATH 070. This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a transferable course that requires the skills obtained in intermediate algebra. It covers rational expressions, radical expressions and complex numbers, quadratic equations and inequalities, functions, exponential and logarithmic functions. Students must pass MATH 070AB in order to register for MATH 070CD.
2 Units
45 Lecture hours

MATH 070D
Intermediate Algebra D
Prerequisite: MATH 070C or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU if taken prior to the Fall Semester, 1988
This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college-level transferable course. See MATH 070 for more information.
1 Unit
22.5 Lecture hours

MATH 073
B-STEM Intermediate Algebra
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college-level transferable course. It is designed primarily for students who plan to major in Business, Science, Technology, Engineering, or Math (B-STEM). This course consists of topics including radical and rational expressions and equations, complex absolute value equations and inequalities, relations and functions, synthetic division, graphs of functions, exponential and logarithmic expressions and their applications, as well as complex numbers.
5 Units
90 Lecture hours

MATH 073A
B-STEM Intermediate Algebra - A
Prerequisite: MATH 050 or MATH 050D or MATH 053 or MATH 053B or appropriate skill level as determined by participation in the math placement process.
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
This course is the first half of a modularized version of MATH 073. It is designed for students who have completed an elementary algebra course and need to complete an additional course in algebra before proceeding to a college-level transferable course. It is primarily for students who plan to major in Business, Science, Technology, Engineering, or Math (B-STEM). This course consists of topics including radical and rational expressions and equations, complex absolute value equations and inequalities, relations and functions, synthetic division, graphs of functions, exponential and logarithmic expressions and their applications, as well as complex numbers.
4 Units
72 Lecture hours

MATH 130 (C-ID MATH 110)
Statistics
Prerequisite: MATH 062 or MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement
Advisory: ENGL 101 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant credit for only one of the following courses: MATH 130 or MATH 130H or PSY 190)
This course is designed for students majoring in business, social sciences, and life sciences. This course provides an overview of descriptive and inferential statistics. The students learn to read, interpret and present data in a well-organized way. This includes frequency distributions, graphs, measures of central tendency and variability, correlation and linear regression. While discussing inferential statistics, the students learn to make generalizations about populations. This includes probability, sampling techniques, confidence intervals, and hypothesis tests.
4 Units
72 Lecture hours

MATH 130H (C-ID MATH 110)
Statistics Honors
Prerequisite: MATH 062 or MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement; Minimum GPA of 3.0; ENGL 101
Advisory: READ 101 or appropriate placement
Transfers to: UC (credit limit*), CSU (*The UC will grant credit for only one of the following courses: MATH 130 or MATH 130H or PSY 190)
This course is designed for students majoring in business, social sciences, and life sciences. This course provides an overview of descriptive and inferential statistics. The students learn to read, interpret and present
data in a well-organized way. This includes frequency distributions, graphs, measures of central tendency and variability, correlation and linear regression. While discussing inferential statistics, the students learn to make generalizations about populations. This includes probability, sampling techniques, confidence intervals, and hypothesis tests. This course is intended for students who meet Honors Program requirements.

4 Units
72 Lecture hours

MATH 140 (C-ID MATH 120)
Mathematics for Elementary Teachers
Prerequisite: MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: UC, CSU
This course is designed to deepen and extend the student’s understanding of the foundations of the mathematics taught in elementary school. Because it is intended for the student preparing to teach at that level, it frequently refers to and uses materials and methodology appropriate for students at that level, but it is not a methods course. The course is concept-driven with an emphasis on problem solving. Concrete manipulatives are used to give meaning to abstract mathematical concepts. Topics include numeration and place value concepts, models and algorithms for operations with whole numbers, integers, fractions and decimals, and the structure and properties of the real number system.

4 Units
90 Lecture hours

MATH 141
Mathematics for Elementary Teachers
Prerequisite: MATH 060 and MATH 140
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
MATH 141 is a continuation of MATH 140. Topics include probability, statistics, informal geometry in two and three dimensions, coordinate geometry, measurement, similarity, tessellations, constructions, and an introduction to Euclidean geometry. Manipulatives and appropriate technology are used as tools for exploration and problem solving. This course is intended for elementary education majors planning to teach in elementary or middle schools.

4 Units
72 Lecture hours

MATH 150
Quantitative Reasoning in Today’s World
Prerequisite: MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course will involve the application of mathematics skills to the analysis and interpretation of real-world quantitative information to determine which skills and procedures can be applied to a particular problem to draw conclusions that are relevant to the students in their daily lives. More specifically, this course will engage the student and grow the following capabilities: reading and understanding quantitative information given in various formats; interpreting quantitative information and drawing inferences from it; solving problems using arithmetic, algebraic, geometric, logic, or statistical methods; estimating answers and checking for reasonableness; communicating quantitative information; and recognizing the limitations of mathematical methods. This course will draw on applications from financial mathematics, combinatorics and probability, descriptive statistics and regression, and geometry.

3 Units
54 Lecture hours

MATH 160 (C-ID MATH 150)
College Algebra
Prerequisite: MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: MATH 160 or MATH 165 or MATH 180)
This course will cover linear, quadratic, polynomial, power, exponential, and logarithmic functions and their applications from a graphical, numerical, and analytical point of view. The course also will cover systems of equations and inequalities and sequences and series. The course serves as preparation for students planning to take Elements of Calculus (MATH 170). Graphing technology will be required.

4 Units
72 Lecture hours

MATH 170 (C-ID MATH 140)
Elements of Calculus
Prerequisite: MATH 160 or appropriate placement
Advisory: ENGL 101; READ 101
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: MATH 170, MATH 190, or MATH 190H)
This is a one-semester course in the fundamentals of algebra-based calculus and its applications to the fields of business, economics, social sciences, biology and technology. Course topics include graphing of functions, applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions, multivariable derivatives and differential equations.

4 Units
72 Lecture hours

MATH 175 (C-ID MATH 851)
Plane Trigonometry
Prerequisite: MATH 060 and MATH 070 or MATH 070D or MATH 073 or MATH 073B or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students who are majoring in math, science, and engineering. It equips students with the skills necessary for success in precalculus. This course presents the concepts of plane trigonometry using a functions approach. Included is a study of trigonometric functions, their inverses and their graphs, identities and proofs related to trigonometric expressions, trigonometric equations, solving right triangles, solving triangles using the Law of Cosines and the Law of Sines, polar coordinates, and an introduction to vectors.

3 Units
72 Lecture hours

MATH 180 (C-ID MATH 155)
Pre-Calculus
Prerequisite: MATH 175 or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 101 or appropriate placement.
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: MATH 160 or MATH 165 or MATH 180)
This course is designed to prepare students for the study of calculus. It presents a comprehensive study of linear, quadratic, polynomial, exponential, logarithmic, rational, and trigonometric functions. Inequalities, introductory analytical geometry, polar coordinates, polar equations and their graphs, DeMoivre’s Theorem and an introduction to sequences are also included. This course is a prerequisite for MATH 190.

4 Units
72 Lecture hours
MATH 190 (C-ID MATH 210, MATH 900S)
Calculus I
Prerequisite: MATH 180
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 101 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: MATH 170, MATH 190 or MATH 190H)
MATH 190 is a semester course designed primarily for those students planning to pursue programs in engineering, mathematics, computer science, and physical sciences. This is the first course in differential and integral calculus of a single variable. It includes topics in functions, limits and continuity, techniques and applications of differentiation and integration, and the Fundamental Theorem of Calculus.
4 Units
90 Lecture hours

MATH 190H (C-ID MATH 900S)
Calculus I Honors
Prerequisite: MATH 180; ENGL 101
Advisory: READ 101 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: MATH 170, MATH 190 or MATH 190H)
MATH 190H is a semester course designed primarily for those students planning to pursue programs in engineering, mathematics, computer science, and physical sciences. This is the first course in differential and integral calculus of a single variable. It includes topics in functions, limits and continuity, techniques and applications of differentiation and integration, and the Fundamental Theorem of Calculus.
4 Units
90 Lecture hours

MATH 191 (C-ID MATH 900S and MATH 220)
Calculus II
Prerequisite: MATH 190 or MATH 190H or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 101 or appropriate placement
Transfers to: UC, CSU
MATH 191 is a semester course which continues the study of calculus begun in MATH 190. The course includes techniques of integration, improper integrals, anti-derivatives, applications of the definite integral, differential equations, Taylor polynomials, series, polar equations and parametric equations. This course is the second course of the calculus sequence required of engineering, physics, and mathematics majors.
4 Units
90 Lecture hours

MATH 250 (C-ID MATH 230)
Calculus III
Prerequisite: MATH 191
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 101 or appropriate placement
Transfers to: UC, CSU
This course involves a study of functions of two or more variables using the principles of calculus, vector analysis, and parametric equations. Included is a study of solid regions using partial differentiation, vector analysis, and multiple integration. This course also includes a study of vector calculus topics, such as line and surface integrals, Green's Theorem, Stokes' Theorem, and the Divergence Theorem. This is the third course of the calculus sequence required of engineering, physics, and mathematics majors.
4 Units
90 Lecture hours

MATH 260 (C-ID MATH 250)
Linear Algebra
Prerequisite: MATH 191
Transfers to: UC, CSU
This course is an introductory study of linear algebra with applications to problems in the physical and social sciences. It includes the solution of systems of linear equations, matrix algebra with inverses, determinants, vectors and vector spaces, linear transformations, Eigenvalues and Eigenvectors, orthogonality and diagonalization. This course is required for Engineering, Physics, Computer Science and Mathematics majors.
4 Units
72 Lecture hours

MATH 270 (C-ID MATH 240)
Differential Equations
Prerequisite: MATH 250
Transfers to: UC, CSU
This course is a study of ordinary differential equations with applications in the physical and social sciences. The course includes a study of linear and nonlinear first-order differential equations, linear higher order differential equations, systems of differential equations, power series solution of differential equations, and Laplace transforms. This course is a continuation of MATH 190, MATH 191, and MATH 250 and is required for all Engineering, Physics, and Mathematics majors.
4 Units
72 Lecture hours

MUS 101 (C-ID MUS 110)
Fundamentals of Music
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a course designed for the student interested in the fundamentals of music theory. Included in this class will be a study of basic notation, rhythm reading, major and minor scale construction, simple musical analysis and basic chord construction.
3 Units
54 Lecture hours

MUS 103 (C-ID MUS 120)
Music Theory I
Corequisite: MUS 106
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course, through guided composition and analysis, incorporates the following concepts: rhythm and meter; basic properties of sound; intervals; diatonic scales and triads; diatonic chords, basic cadential formulas and phrase structure; dominant seventh; figured bass symbols; and non-harmonic tones. Develop-
MUS 104 (C-ID MUS 130)  
Music Theory II  
Prerequisite: MUS 103  
Corequisite: MUS 107  
Advisory: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course incorporates the concepts from Music Theory I. In addition, through guided composition and analysis, the course will include: an introduction to two-part counterpoint; voice leading involving four-part choral writing; diatonic harmony; and an introduction to secondary/applied chords and modulation.  
3 Units  
54 Lecture hours

MUS 105 (C-ID MUS 140)  
Music Theory III  
Prerequisite: MUS 104  
Corequisite: MUS 156  
Advisory: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course incorporates the concepts from Music Theory II. In addition, through writing and analysis, the course will include: introduction to chromatic harmony; secondary/applied chords; modulation; borrowed chords; introduction to Neapolitan and augmented-sixth chords.  
3 Units  
54 Lecture hours

MUS 106 (C-ID MUS 125)  
Musicianship I  
Corequisite: MUS 103  
Advisory: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course is designed for the student who wants to develop beginning aural skills, sight-reading, sight-singing, as well as dictation and rhythmic interpretation skills. It is recommended for all instrumentalists, singers and composers and required of all music majors.  
1 Unit  
54 Lab hours

MUS 107 (C-ID MUS 135)  
Musicianship II  
Prerequisite: MUS 106  
Corequisite: MUS 104  
Advisory: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course is designed for the student who wants to develop the rhythmic, melodic, and harmonic materials of Music Theory II through ear training, sight singing, analysis, and dictation. This course is required of all music majors.  
1 Unit  
54 Lab hours

MUS 109  
Contemporary Theory:  
Popular and Jazz Harmony  
Prerequisite: MUS 101  
Advice: READ 043 or appropriate placement  
Transfers to: UC, CSU  
This course is designed for the student who wants to learn the basic concepts associated with constructing chords, the song forms, and the melodies that are identified with Popular and Jazz styles in contemporary music.  
3 Units  
54 Lecture hours

MUS 110  
College Community Orchestra  
Advisory: MUS 101  
Transfers to: UC, CSU  
This course is designed for the instrumental music student who wants to become familiar with the vast body of orchestral music. It provides players an opportunity to develop their own musical capabilities as well as participating in ensemble playing. Students are expected to provide their own instruments. This course may be taken once and repeated three times for credit.  
1 Unit  
54 Lab hours

MUS 111  
Diverse Instruments Ensemble  
Prerequisite: Successful audition with instructor approval required prior to enrollment to demonstrate proficiency of entry skills.  
Advisory: MUS 101  
Transfers to: UC, CSU  
This course is designed for the student who seeks the needed skills to study, rehearse, and perform literature within a large vocal ensemble. Participation in public performance is required. The repertoire will include a diversity of selections including classical choral literature, world music, popular and contemporary music. Previous choral experience is not required. This course may be taken for credit up to four times for a total of 4 units.  
1 Unit  
54 Lab hours

MUS 119  
Advanced College Community Orchestra  
Prerequisite: MUS 110  
Transfers to: CSU  
This course is designed for the more advanced instrumental music student who wants to become more familiar with the vast body of orchestral music. It provides advanced players an opportunity to further develop their own musical capabilities as well as participate in ensemble playing. Students are expected to provide their own instruments. This course may be taken once and repeated three times for credit.  
1 Unit  
54 Lab hours

MUS 120  
Concert Choir  
Advisory: ENGL 030 or ENLA 034 or appropriate placement  
Transfers to: UC, CSU  
This course is designed for the student who seeks the needed skills to study, rehearse, and perform literature within a large vocal ensemble. Participation in public performance is required. The repertoire will include a diversity of selections including classical choral literature, world music, popular and contemporary music. Previous choral experience is not required. This course may be taken for credit up to four times for a total of 4 units.  
1 Unit  
54 Lab hours

MUS 121  
Gospel Choir  
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MUS 120  
Transfers to: UC, CSU  
Gospel choir is a college chorus of mixed voices dedicated to the study, rehearsal, and public performance of anthems, spirituals, and gospel (traditional/contemporary) music. It is designed for the student seeking to learn the fundamentals of singing in the African-American contemporary gospel style. This class provides for the learning of the fundamentals of choral singing. Performances both
Music History and Literature After 1750
MUS 130

Music History and Literature Before 1750
MUS 131

Music in Latin American Culture
MUS 129

Music History and

MUS 132
History of Rock and Roll

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is a survey course designed for the student who seeks an introduction to music in Latin American culture. The course will focus on the diverse musical cultures of South America, Central America, Mexico, Puerto Rico and the Caribbean. Emphasis will be placed on rhythmic styles and structures, as well as, specific social, cultural, and historical backgrounds.

3 Units
54 Lecture hours

MUS 133 (C-ID MUS 100)
Music Appreciation

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is a survey course aimed at introducing students to the world of music history with an emphasis on social, political, and cultural contexts. Types of music to be covered will include Classical, Jazz, Rock, Blues and World Music. The course is targeted for students seeking to fulfill the general education requirement in the arts.

3 Units
54 Lecture hours

MUS 134
Chamber Singers

Advisory: READ 043 or appropriate placement; MUS 120
Transfers to: CSU

This course is designed for students who seek to broaden their understanding of choral literature by performing increasingly difficult choral works. Attention is given to the refinement and polishing of technique through rehearsal and performance of choral music from various musical periods and styles. Public Performance is required.

1 Unit
13.5 Lecture hours
13.5 Lab hours

MUS 135
Music in Film

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is a survey of the art and craft of film music as practiced by prominent film composers and sound designers. Emphasis will be placed on history and function from 1930 to the present, as well as cultural context. The class is designed for students interested in learning how music influences film.

3 Units
54 Lecture hours

MUS 136
History of Jazz

Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is a survey course designed for the student who seeks an introduction to Jazz. The course will focus on jazz music, its origins and its many sub-styles. The social, political and economic influence the music has had on society and other types of music will also be examined.

3 Units
54 Lecture hours

MUS 138
Masterworks Chorale

Prerequisite: Audition
Advisory: ENGL 030 or ENLA 034 or appropriate placement
Transfers to: UC, CSU

This advanced level course is designed for students who seek to broaden their understanding of choral literature by performing difficult choral works such as the B minor Mass by Bach, Elijah by Mendelssohn, or Messiah by Handel accompanied by orchestra or other instrumental ensemble. Attention is given to the refinement and polishing of technique through rehearsal and performance of choral music from various musical periods and styles. Public Performance is required.

Enrollment criteria requires an audition.
2 Units
27 Lecture hours
27 Lab hours

MUS 139
Advanced Concert Choir

Prerequisite: MUS 220
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed for the more advanced vocal student who seeks an opportunity to perform in a vocal ensemble. The repertoire will include a diversity of approaches that might include Latin, Asian, popular, contemporary, and classical music.

2 Units
27 Lecture hours
27 Lab hours

MUS 140
Beginning Voice I

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This introductory course is designed for the student who seeks an introduction to voice and its relationship to the physical, mental, and spiritual aspects of the human being. The basic techniques of producing vocal sound will be learned through various textural, tonal and spatial exercises. The course will also provide an overview of the history of vocal music from the Medieval period to the present day.

2 Units
27 Lecture hours
27 Lab hours
This course is designed for students who wish to learn the foundation skills of singing including breath support, posture, intonation, enunciation, and stage presence. Students will prepare songs appropriate for the beginning skill level. No previous musical experience is necessary.

1.5 Units
18 Lecture hours
27 Lab hours

MUS 141
History of Rap Music and Hip Hop Culture
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course will explore the roots of rap music and hip-hop culture from its African bardic tradition to African-American expressive/oral traditions. In addition, it will locate rap in the context of hip-hop and as a part of a continuum of American popular music. This course is designed for the student who seeks to expand their knowledge of rap music and the hip hop culture.

3 Units
54 Lecture hours

MUS 142
Intermediate Voice I
Prerequisite: MUS 141
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who wish to further develop the techniques acquired in Beginning Voice. A comprehensive study of style and artistic interpretation will be included.

1.5 Units
18 Lecture hours
27 Lab hours

MUS 145 (C-ID MUS 170)
Piano I
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This class is for the student interested in beginning piano skills, and in the understanding of music through the study of simple piano pieces. The development of skills at the beginning level may be used in the playing of various styles including Classical, Pop, Jazz and Rock. Individual pieces are performed in class. This course is a continuation of materials learned in Piano I.

1 Unit
18 Lecture hours

MUS 147 (C-ID MUS 172)
Piano III
Prerequisite: MUS 146
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students seeking to broaden their knowledge and understanding of piano literature. Varied works of intermediate difficulty will be introduced. Attention is given to the refinement and polishing of technique through scales, arpeggios, sight-reading, interpretation and tone production.

1 Unit
18 Lecture hours

MUS 148
Piano IV
Prerequisite: MUS 147
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students seeking to broaden their knowledge and understanding of piano literature. More advanced solo literature of intermediate difficulty will be introduced. Emphasis is placed on the technical and interpretive demands required to perform a varied repertoire.

1 Unit
18 Lecture hours

MUS 150
Beginning Guitar
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student interested in beginning guitar skills and in the understanding of music through the study of simple guitar pieces. The development of skills at the beginning level may be used in the playing of various styles including Classical, Pop, Jazz, Rock and Blues. No previous musical experience is necessary.

1.5 Units
18 Lecture hours
27 Lab hours

MUS 151
Intermediate Guitar
Prerequisite: MUS 150
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This intermediate level course is designed for students who seek to broaden their understanding of guitar literature by performing moderately difficult works. Attention is given to the refinement and polishing of technique through scales, arpeggios, sight-reading, interpretation and tone production.

1.5 Units
27 Lecture hours

MUS 154
Guitar Ensemble
Prerequisite: Must have completed at least one semester of guitar
Transfers to: UC, CSU
This course will offer the opportunity for guitarists, electric or acoustic, to perform together in an ensemble. The ensemble content will depend upon the makeup of the class and will include a diversity of approaches that might include Latin, Asian, Popular and Classical Music. Recommended for guitarist whether they be music majors or not.

2 Units
27 Lecture hours
27 Lab hours

MUS 156 (C-ID MUS 145)
Musicianship III
Prerequisite: MUS 107
Corequisite: MUS 105
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wants to develop the rhythmic, melodic, and harmonic materials of Music Theory III through ear training, sight singing analysis and dictation. This course is required of all music majors.

1 Unit
54 Lab hours

MUS 157 (C-ID MUS 155)
Musicianship IV
Prerequisite: MUS 156
Corequisite: MUS 206
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wants to develop the rhythmic, melodic, and harmonic materials of Music Theory IV through ear training, sight singing, analysis, and dictation. This course is required of all music majors.

1 Unit
54 Lab hours
MUS 181 (C-ID MUS 160)
Applied Music

Prerequisite: Audition
Corequisite: Enrollment in a Rio Hondo College Large Ensemble (either MUS 116 or MUS 117 or MUS 120 MUS 216 or MUS 217 or MUS 218 or MUS 219 or MUS 220 or MUS 221 or MUS 222 or MUS 223 or MUS 224)
Advisory: ENGL 030 or ENLA 034 or appropriate placement
Transfers to: UC, CSU
This course is for the student interested in receiving individual instruction in voice, piano, guitar, band, or orchestral instruments with an assigned instructor. Emphasis will be placed on study at the beginning level of technique and repertoire. Weekly, it includes one recital class, and one individual lesson. Performance for a faculty jury will be required at the end of the semester. This course may be taken for credit up to four times for a total of 2 units.
0.50 Unit
9 Lecture hours

MUS 180
Music Laboratory

Corequisite: MUS 165 or 167
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed to provide students enrolled in electronic music courses with supervised study or practice.
1 Unit
54 Lab hours

MUS 181 (C-ID MUS 160)
Advanced Music Ensemble for Diverse Instruments II

Prerequisite: MUS 216
Advisory: ENGL 030 or ENLA 034 or appropriate placement
Transfers to: UC, CSU
This course is designed for the advanced electric, acoustic instrumental, and vocal students who want to interpret and perform ensemble repertoire at a professional level. The course content, which will depend upon the instrumental and vocal makeup of the class, will include a diversity of approaches that might include Latin, Asian, Popular and contemporary Classical Music.
2.5 Units
27 Lecture hours
54 Lab hours

MUS 220
Concert Choir II

Prerequisite: MUS 120
Advisory: ENGL 030 or ENLA 034 or appropriate placement
Transfers to: UC, CSU
This course is designed for the intermediate vocal student who seeks an opportunity to perform in a vocal ensemble. Participation in public performance is required. The repertoire will include a diversity of sections including intermediate level classical choral literature, world music, popular and contemporary music. Successful completion of MUS 120 is required to enroll.
2 Units
27 Lecture hours
27 Lab hours

MUS 234 (C-ID MUS 180)
Advanced Chamber Singers

Prerequisite: MUS 134
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students with advanced skills in rehearsing and performing choral music. A wide variety of music selected from different musical periods and styles will be selected for study and performance. Enrollment criteria includes successful completion of MUS 134. This course may be taken up to four times for a total of 8 units.
2 Units
27 Lecture hours
27 Lab hours

MUS 240
Advanced Voice I

Prerequisite: MUS 142
Advisory: READ 043 or appropriate placement
MUS 252
Advanced Guitar I
Prerequisite: MUS 151
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who have completed or enrolled in the appropriate coursework. Instructor approval is required to remain in the class. "Contact the CWE office regarding re-enrollment procedures."
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

MUS 259
Cooperative Work Experience/Internship for Music Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business, industrial, non-profit, studio, community and professional music organizations under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of music and have completed or enrolled in the appropriate course-work. Instructor approval is required to remain in the class. "Contact the CWE office regarding re-enrollment procedures."
MUS 290
Directed Study: Music
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide. 
1 to 3 Units
54 to 162 Lab hours

MUSIC TECHNOLOGY
Division of Arts & Cultural Programs

MUST 101 (C-ID CMUS 100X)
Introduction to Music Technology
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is designed for the student who wants to learn the terminology, equipment, techniques, and concepts of music technology. Focus will be on principles and practices of sound, digital audio, synthesis, Musical Instrument Digital Interface (MIDI), MIDI sequencing, notation software, and audio recording utilizing hardware and software platforms. Lab activities will place an emphasis on the operation and components of the typical MIDI and digital audio lab (hardware and software). Students will complete independent projects demonstrating hands-on knowledge.
3 Units
36 Lecture hours
54 Lab hours

MUST 115 (C-ID CMUS 150X)
Songwriting and Arranging I
Prerequisite: MUS 103 and MUST 101
Advisory: READ 043 or appropriate placement
Transfers to: CSU, UC
This course is designed for the student who wants to learn the process of songwriting. Songs will be analyzed on chord structure, form, rhythm, melody, harmony, and lyrics. Original compositions and performances are expected from all students.
3 Units
36 Lecture hours
54 Lab hours

MUST 116
Songwriting and Arranging II
Prerequisite: MUST 115 or MUS 104
Advisory: READ 043 or appropriate placement
Transfers to: CSU, UC
This course is designed for the student who wants to further their knowledge of the process of songwriting and arranging. Complex songs and advanced song forms will be analyzed on chord structure, form, rhythm, melody, harmony, and lyrics. Additional emphasis on the
Electronic Music III
Prerequisite: MUST 122
Advisory: READ 043 or appropriate placement

This course is designed for the student who wants to continue the study of concepts and techniques needed to compose electronic music and is recommended for students who intend to pursue music professionally. Various types of synthesis including software analog synthesis and virtual analog synthesis will be studied. Software that will be used in the course may include Logic Pro and Ableton Live. Sequencing, recording via studio software, notating compositions and creating music for video games and animation, dance, and theatre will be the primary focus of the course.

3 Units
36 Lecture hours
54 Lab hours

MUST 146
Live Sound Reinforcement II
Prerequisite: MUST 145
Advisory: READ 043 or appropriate placement

This course is designed for the student who seeks to further their knowledge in live concert sound reinforcement. Topics include professional communication with musicians, intermediate sound system theory and its application. It also covers individual sound system component operation, including microphones, mixers, effects, power amplifiers, and speaker systems. This course offers opportunities for hands-on experiences in troubleshooting, sound checking, and mixing sound for live performance applications.

3 Units
36 Lecture hours
54 Lab hours

NUTRITION SCIENCE
Division of Health Science & Nursing

NUTR 110
Introduction to Nutrition Science
Advisory: ENGL 035 or ENLA 100 or appropriate placement

This course is designed to provide students with basic knowledge of scientific concepts related to the function of nutrients in basic life processes and current health issues with emphasis on individual needs, dietary guidelines, macronutrients, micronutrients, digestion, absorption, metabolism, health, and disease prevention through a balanced diet.
This course is appropriate for nutrition majors and health science majors, including nursing.

3 Units
54 Lecture hours

NUTR 120
Principles of Foods with Lab
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students majoring in nutrition to learn the application of food science principles with emphasis on ingredient function and interaction, food preparation, food preparation techniques, sensory evaluation standards, food safety and sanitation, and nutrient composition of food.

3 Units
45 Lecture hours
27 Lab hours

OPERATING ENGINEERS
Division of Career & Technical Education

OENG 001
Introduction to Apprenticeship
Prerequisite: Registration as a State Indentured Apprentice
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: making yourself valuable, safety, first aid, the cost of accidents, industry terminology, setting up a string line, standard industry hand signals, labor unions and learning to operate heavy equipment.

2 Units
36 Lecture hours
36 Lab hours

OENG 002
Grade Checking
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: safety consciousness, layout and staking methods for subdivisions, streets, buildings, underground structure excavation, right angle triangles, and curve radii.

2 Units
36 Lecture hours
36 Lab hours

OENG 003
Equipment Operator
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: preventive maintenance of heavy equipment, operation of heavy equipment and political science.

2 Units
36 Lecture hours
36 Lab hours

OENG 004
Plan Reading
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: reading and interpreting grading plans for highways, streets and subdivisions.

2 Units
36 Lecture hours
36 Lab hours

OENG 005
Skills Specialization
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: the labor movement in the United States, relationship of politics to construction work, preventive maintenance, and the operation of heavy equipment.

2 Units
36 Lecture hours
36 Lab hours

OENG 012
Welding
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: the safe use oxyacetylene cutting equipment, the technique of brazing, and electric arc welding.

2 Units
36 Lecture hours
36 Lab hours

OENG 013
Introduction to Hydraulics
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: the principles of hydraulics, how a hydraulic system works and the practical uses of hydraulics.

2 Units
36 Lecture hours
36 Lab hours

OENG 014
Advanced Hydraulics/Pneumatics
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: diagnosis, service and repair of hydraulic valves, motors, pumps and cylinders; diagnosis and repair of variable speed hydraulic drives; service and maintenance of pneumatic systems used on heavy equipment and heavy trucks.

2 Units
36 Lecture hours
36 Lab hours

OENG 015
Engines - Gasoline and Diesel
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
This course is designed to meet the needs of State Indentured Apprentices employed full-time in the operating engineer field. Topics covered include: the principles of hydraulics, how a hydraulic system works and the practical uses of hydraulics.
covered include: internal combustion engine theory and servicing the fuel, lubricating, and governing systems of gasoline and diesel engines.

2 Units
36 Lecture hours
36 Lab hours

OENG 021 Grades and Plans
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement.
This course is designed to develop the ability to read grade plans, establish lines and elevations from previously established control points defined in the grade plans and learn how to check grade plans.
2 Units
36 Lecture hours
36 Lab hours

OENG 022 Structural Masonry Inspection
Prerequisite: State Indentured Apprentice in the Operating Engineers Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the field of Operating Engineers Inspectors. Topics include industry safety, industry terminology, structural steel/welding inspection testing, blueprint reading, field interpretation, and successful completion of the industry standard certification examination.
4 Units
54 Lecture hours
54 Lab hours

OENG 023 Reinforced Concrete Inspection
Prerequisite: Must be an Indentured Apprentice in the Operating Engineers State Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the field of Operating Engineers Inspectors. Topics include industry safety, applications of reinforced concrete structure, sample testing, industry terminology, reinforced concrete inspection testing, blueprint reading, field interpretation, and successful completion of the industry standard certification examination.
4 Units
54 Lecture hours
54 Lab hours

OENG 024 Structural Steel/Welding Inspection
Prerequisite: Must be an Indentured Apprentice for the State of California in the Operating Engineers Training Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the field of Operating Engineers Inspectors. Topics include industry safety, industry terminology, structural steel/welding inspection testing, analytical blueprint reading, field interpretation, and successful completion of the industry standard certification examination.
4 Units
54 Lecture hours
54 Lab hours

OENG 025 Prestressed Concrete Inspector
Prerequisite: Indentured Apprentice for the State of California in the Operating Engineers Training Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the field of Operating Engineers Inspectors. Topics include safety, industry terminology, prestressed concrete inspection, blueprint reading, field interpretation, and successful completion of the industry standard certification examination.
4 Units
54 Lecture hours
54 Lab hours

OENG 026 Soils Testing and Inspection
Prerequisite: Must be an Indentured Apprentice in the Operating Engineers Training Trust Apprenticeship Program
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course is designed to meet the needs of State Indentured Apprentices with the State of California who are interested in the field of Operating Engineers Inspectors. Topics include industry safety, industry terminology, inspection testing procedures, blueprint reading, field interpretation, and successful completion of a certification class sponsored by the American Concrete Institute and Nuclear Safety Course.
4 Units
54 Lecture hours
54 Lab hours

OENG 290 Work Experience in Operating Engineers Union Apprenticeship
Prerequisite: State Indentured Operating Engineers Union Apprenticeship Advisory: ENGL 035 or ENLA 100 or appropriate placement; MATH 020 or MATH 020C or appropriate placement.
This course provides students the opportunity to work in the Operating Engineers apprenticeship program for the purpose of developing specific skills to meet the goals and objectives of the Operating Engineers Joint Apprenticeship Council (J.A.C.). Students complete work experience hours at approved training sites. Students may take up to 16 units total across all Work Experience course offerings. Only one Work Experience course may be taken per semester.
1 to 4 Units
3 Lecture hours
75 to 225 Other

ORTH 040 Introduction to Orthopedic Technology
Prerequisite: BIOL 125; ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
This course will provide students with

ORTHOPEDIC TECHNOLOGY
Division of Health Science & Nursing

ORTH 040 Introduction to Orthopedic Technology
Prerequisite: BIOL 125; ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement.
This course will provide students with
with an introduction to the roles, professional responsibilities, code of ethics, and employment qualifications of an Orthopedic Technician. Instruction will also include the review of the musculoskeletal system as it relates to the field of orthopedic technology emphasizing locomotor, neuromuscular and peripheral vascular structures.

4 Units
72 Lecture hours

ORTH 050
Orthopedic Technician Health Assessment
Prerequisite: ORTH 040
This course will provide the student with entry-level abilities to function as an Orthopedic Technician. Students will receive instruction in the physical examination of the extremities, spine and pelvis. Instruction will include joint range of motion, specific muscle group testing and measuring the locomotor system.

3 Units
45 Lecture hours
27 Lab hours

ORTH 060
Orthopedic Technician Modalities
Prerequisite: ORTH 050
This course will provide the student with entry-level abilities to function as an Orthopedic Technician in the private practice, hospital and managed care facilities. Students will receive instruction in back office skills focusing on casting, splinting, application of soft goods, wound care management, client communication and surgical assisting in major and minor orthopedic procedures. The student will learn operating room etiquette, gowning, gloving, sterile back table set-up for category 3 major procedures.

4 Units
36 Lecture hours
108 Lab hours

ORTH 070
Orthopedic Technician Practicum
Prerequisite: ORTH 060
This course will provide the student with entry-level abilities to function as an Orthopedic Technician. Students will participate in clinical and hospital rotations consisting of instruction in back office skills to include casting, splinting, application of soft goods, wound care management, client communication, sterile technique, operating room etiquette, gowning, gloving, and sterile back table set-up for category 3 major procedures.

4 Units
18 Lecture hours
162 Lab hours

PHILOLOGY
Division of Behavioral & Social Sciences

PHIL 101 (C-ID PHIL 100)
Introduction to Philosophy
Advisory: ENGL 101 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course introduces philosophical ideas and methods concerning knowledge, reality and values. Expected topics will include the sources and limits of knowledge, and the nature of reality. Other topics that may be examined from a philosophical perspective include the nature of the self, truth, ethics, religion, science, language, beauty and art, political theory, or mind. This course is appropriate for anyone seeking a broader program of philosophical study, or to fulfill general Humanities or Philosophy major requirements.

3 Units
54 Lecture hours

PHIL 101H (C-ID PHIL 100)
Introduction to Philosophy Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course introduces philosophical ideas and methods concerning knowledge, reality and values. Expected topics will include the sources and limits of knowledge, and the nature of reality. Other topics that may be examined from a philosophical perspective include the nature of the self, truth, ethics, religion, science, language, beauty and art, political theory, or mind. This course is intended for those who meet Honors Program requirements.

3 Units
54 Lecture hours

PHIL 110
Critical Thinking
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is an introduction to the methods and techniques of informal reasoning. Topics include schematizing and articulating arguments, causal arguments, analogical arguments, testimony arguments, informal fallacies, and others. Emphasis on the application of critical thinking for effective writing will be reflected in the frequency, scope, and nature of course writing assignments, which will be evaluated with regard to both content and form. Students should expect to write approximately 8000 words in various writing assignments. This course is appropriate for students seeking to improve their writing and reasoning skills. This course is intended for those who meet Honors Program Requirements.

3 Units
54 Lecture hours

PHIL 110H
Critical Thinking Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is an introduction to the methods and techniques of informal reasoning. Topics include schematizing and articulating arguments, causal arguments, analogical arguments, testimony arguments, informal fallacies, and others. Emphasis on the application of critical thinking for effective writing will be reflected in the frequency, scope, and nature of course writing assignments, which will be evaluated with regard to both content and form. Students should expect to write approximately 8000 words in various writing assignments. This course is appropriate for students seeking to improve their writing and reasoning skills. This course is intended for those who meet Honors Program Requirements.

3 Units
54 Lecture hours

PHIL 112 (C-ID PHIL 110)
Introduction to Logic
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC, CSU
This course introduces the formal methods and principles of deductive logic. Topics include translation between natural and formal language, syllogistic logic, and propositional logic. This course is especially recommended for students of mathematics, business, computer science, science, engineering, law, and humanities.

3 Units
54 Lecture hours

PHIL 112H (C-ID PHIL 110)
Introduction to Logic Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement; MATH 030 or MATH 030D or MATH 033 or appropriate placement
Transfers to: UC, CSU
This course introduces the formal methods and principles of deductive logic. Topics include translation between natural and formal language, syllogistic logic, and propositional logic. This course is especially recommended for students of mathematics, business, computer science, science, engineering, law, and humanities.
This course introduces the formal methods and principles of deductive logic. Topics include translation between natural and formal language, syllogistic logic, and propositional logic. This course is especially recommended for students of mathematics, business, computer science, science, engineering, law, and humanities. This course is intended for those who meet Honors Program requirements.

PHIL 115 (C-ID PHIL 210)
Symbolic Logic
Advisory: READ 043 or appropriate placement; PHIL 101 or PHIL 101H; PHIL 112 or PHIL 112H
Transfers to: UC, CSU
This course is intended for students interested in symbolic methods of deductive reasoning including philosophy and mathematics majors. Students taking this course will develop an understanding of both sentential logic and predicate logic. Students will also learn to translate ordinary language sentences and arguments into symbolic form and evaluate symbolic arguments for validity using truth-tables and natural deduction techniques.

3 Units
54 Lecture hours

PHIL 120 (C-ID PHIL 120)
Introduction to Ethics
Advisory: ENGL 101; READ 043 or appropriate placement
Transfers to: UC, CSU
This introductory level course is for students interested in the humanities, law, medicine, politics, social science and related fields, and will expose them to some of the most profound moral and ethical questions in the Western philosophical tradition. We will examine the concept of morality and values, representative ethical theories, and may include their applications to moral problems.

3 Units
54 Lecture hours

PHIL 124 (C-ID PHIL 130)
History of Philosophy: Ancient
Advisory: ENGL 101; READ 043 or appropriate placement
Transfers to: UC, CSU
This introductory level course is for those interested specifically in the earliest stages of Ancient Western philosophy. We address the development of Greek philosophy from the Pre-Socratics through Aristotle. We may also include Hellenistic, Roman, medieval or non-western thinkers. Beyond a study of the figures and key ideas, we will discuss the early view of philosophy as a “way of life,” and consider how these movements were intended to transform the lives of those who followed them.

3 Units
54 Lecture hours

PHIL 126 (C-ID PHIL 140)
History of Philosophy: Modern
Advisory: ENGL 101; READ 043 or appropriate placement
Transfers to: UC, CSU
This introductory level course is intended for all students interested in the Modern period of Western Philosophy (16th through 18th Century). We emphasize broad epistemological and metaphysical developments through close analysis of primary texts. Philosophers to be studied will include Descartes and other Rationalists, Hume and other Empiricists, and Kant.

3 Units
54 Lecture hours

PHIL 128 (same as POLS 128)
(C-ID POLS 120)
Introduction to Political Philosophy
Advisory: ENGL 101; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is for students interested in the relationship between political systems and philosophy. It is especially relevant for students interested in political science, philosophy and law. This course introduces the history and development of political thought, and will consider the justification of the State, Libertarianism, Socialism, Communism, as well as conceptions of rights and distributions of goods.

3 Units
54 Lecture hours

PHIL 128H (same as POLS 128H)
(C-ID POLS 120)
Introduction to Political Philosophy
Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is for students interested in the relationship between political systems and philosophy. It is especially relevant for students interested in political science, philosophy and law. This course introduces the history and development of political thought, and will consider the justification of the State, Libertarianism, Socialism, Communism, as well as conceptions of rights and distributions of goods. This course is designed for students who meet Honor’s Program requirements.

3 Units
54 Lecture hours

PHIL 135
Philosophy and Contemporary Issues
Advisory: ENGL 101; READ 043 or appropriate placement
Transfers to: UC, CSU
This introductory course explores the philosophical aspects of a variety of issues of contemporary interest, with an emphasis on social and legal issues. Topics may include, but are not limited to: war/terrorism, euthanasia, philosophical issues pertaining to race/ethnicity/gender/disability, rights and social justice, and the criminal justice/legal system. This course is intended for all students interested in applying methods of philosophy to contemporary topics, for pathway to law (pre-law) students, and for majors in philosophy or political science.

3 Units
54 Lecture hours

PHIL 140
Philosophy of Religion
Advisory: ENGL 101; READ 043 or appropriate placement
Transfers to: UC, CSU
This introductory level course is intended for all students seeking a thoughtful exploration of religious issues in a non-sectarian context, or as part of a broader program of philosophical study. We will address Western religion from a philosophical perspective, including arguments for and against the existence of God, and an investigation into the status of religious beliefs. Additional topics may include a consideration of the evolution-creationism debate, and a discussion of religious pluralism.

3 Units
54 Lecture hours

PHIL 299
Directed Study: Philosophy
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the...
same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units

54 to 162 Lab hours

PHIL 325
Applied and Professional Ethics
Prerequisite: ENGL 201 or ENGL 201H, and PHIL 101 or PHIL 101H or PHIL 110 or PHIL 110H or PHIL 120
This upper division general education course is designed for students pursuing a Bachelor of Science degree in Automotive Technology but it is also open to all students who have successfully completed the prerequisites. This course is intended for students who seek a greater understanding of the relationship between ethics and human living. This course will expose them to the moral and ethical views in the Western philosophical tradition. Students will then apply these views to various contemporary issues. Expected topics include: business ethics, euthanasia, terrorism, public policy, the death penalty, and issues in science and technology.

3 Units

54 Lecture hours

PHOTOGRAPHY
Division of Arts & Cultural Programs

PHOTO 185
Introduction to Digital Photography
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course provides an introduction to digital photography as a creative art, emphasizing photography as a means of communication and personal expression. An examination of the theory of aesthetics, cultural significance, historical progression, elements of composition, visual literacy, and technical elements of photography will be conducted. Students will be introduced to DSLR camera operation and digital imaging techniques. Students are required to supply their own digital camera. Critical evaluation of student work is also a component of this course.

This class is suitable for photography majors and non-majors alike.

3 Units

36 Lecture hours

72 Lab hours

PHOTO 190
Beginning Photography
Advisory: READ 043 or appropriate placement; ART 120
Transfers to: UC, CSU
This course is designed for students who wish to study the basic technical and conceptual approaches to contemporary photography. Traditional black and white photography techniques are explored, with special emphasis on the basic use of the 35 mm camera and enlarger as well as the processing of black and white film and printing paper. Students are required to provide their own 35 mm camera with manual controls.

3 Units

36 Lecture hours

72 Lab hours

PHOTO 191
Intermediate Photography
Prerequisite: PHOTO 190
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for students who have successfully completed beginning photography and wish to study more advanced technical and conceptual approaches to contemporary black and white photography in a, 35mm film based, wet lab environment. Techniques such as the use of studio lighting, light meters, toners, hand coloring, and solarization are explored, with special emphasis given to understanding the conceptual framework for the production and analysis of both personal and commercial photographic imagery. Students are required to provide their own 35mm camera with manual controls.

3 Units

36 Lecture hours

72 Lab hours

PHOTO 290
Medium and Large Format Photography
Prerequisite: PHOTO 190
Advisory: READ 043 or appropriate placement
Transfers to: CSU
This course is designed for students who have successfully completed beginning photography and wish to study more advanced technical and conceptual approaches to contemporary black and white photography using medium and large format films and cameras in a traditional wet lab environment. Special emphasis is given to the understanding and analysis of photographic imagery.

2 Units

18 Lecture hours

54 Lab hours

PHOTO 292
Digital Photography
Prerequisite: PHOTO 185 or PHOTO 190
Advisory: ENGL 030 or ENLA 034 or appropriate placement
Transfers to: CSU
This course is designed for students who have successfully completed PHOTO 190 and have a working knowledge of basic camera controls and photographic composition. It will cover use of digital cameras, image editing and manipulation, digital printing, and the expression of ideas through digital photographs. Students are required to supply their own digital camera.

3 Units

36 Lecture hours

72 Lab hours

PHOTO 299
Directed Study: Photography
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title 5 regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units

54 to 162 Lab hours
PHYSICS

Division of Mathematics, Sciences, and Engineering

PHY 120
Physics for Everyday Use
Prerequisite: MATH 050 or MATH 050D or MATH 053 or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive no credit for PHY 120 if taken after PHY 150 or PHY 211)
This course investigates the basic characteristics of matter and the interactions that govern its behavior and emphasizes how remarkable everyday phenomena are. Examples from popular culture (movies, TV, and sports) are emphasized. Topics include how to describe an object’s motion, how to explain changes in an object’s motion, the roles of work and energy, and other topics. The course is oriented to the non-science major, stresses conceptual understanding, and is intended to present students with an opportunity to see how our world works.
4 Units
54 Lecture hours
54 Lab hours

PHY 150 (C-ID PHYS 100S, PHYS 105)
General Physics - I
Prerequisite: MATH 175 or appropriate placement
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for one physics series: PHY 150 and PHY 160 or PHY 211, PHY 212, and PHY 213)
This course is the second of a two-semester sequence and is designed for students transferring to a four-year institution with majors in health professional fields such as medicine, dentistry, veterinary science, pharmacy, and optometry as well as those students in engineering technology and architecture. Students majoring in the biological sciences should consult a counselor as to whether this course satisfies the general preparation requirements for the major at the university. Topics include electricity and magnetism, oscillations, waves, optics, and modern physics.
4 Units
54 Lecture hours
54 Lab hours

PHY 160 (C-ID PHYS 100S, PHYS 110)
General Physics - II
Prerequisite: PHY 150
Transfers to: UC (credit limit*), CSU (*Students will receive credit for one physics series: PHY 150 and PHY 160 or PHY 211, PHY 212, and PHY 213)
This course is the second of a two-semester sequence and is designed for students transferring to a four-year institution with majors in health professional fields such as medicine, dentistry, veterinary science, pharmacy, and optometry as well as those students in engineering technology and architecture. Students majoring in the biological sciences should consult a counselor as to whether this course satisfies the general preparation requirements for the major at the university. Topics include thermodynamics, simple harmonic motion, fluids, and energy, work, momentum, conservation for the major at the university. Students majoring in the biological sciences should consult a counselor as to whether this course satisfies the general preparation requirements for the major at the university. Topics include electricity and magnetism, oscillations, waves, optics, and modern physics.
4 Units
54 Lecture hours
54 Lab hours

PHY 211 (C-ID PHYS 200S, PHYS 205)
Physics for Scientists and Engineers - I
Prerequisite: MATH 190 or MATH 190H
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
(*Students will receive credit for one physics series: PHY 150 and PHY 160 or PHY 211, PHY 212, and PHY 213)
This course is the first of a three-semester sequence and is designed for students transferring to a four-year institution with majors in the sciences and engineering. Topics covered are kinematics, dynamics, energy, work, momentum, and conservation principles.
4 Units
54 Lecture hours
54 Lab hours

PHY 212 (C-ID PHYS 200S, PHYS 215)
Physics for Scientists and Engineers - II
Prerequisite: PHY 211 and MATH 191
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for one physics series: PHY 150 and 160 or PHY 211, PHY 212, and PHY 213)
This course is the second of a three-semester sequence and is designed for students transferring to a four-year institution with majors in the sciences and engineering. Topics covered include quantum physics, physical optics, and thermodynamics.
4 Units
54 Lecture hours
54 Lab hours

PHY 213 (C-ID PHYS 200S, PHYS 210)
Physics for Scientists and Engineers - III
Prerequisite: PHY 211 and MATH 191
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
(*Students will receive credit for one physics series: PHY 150 and PHY 160 or PHY 211, PHY 212, and PHY 213)
This course is the third of a three-semester sequence and is designed for students transferring to a four-year institution with majors in the sciences and engineering. Topics covered are electric fields, electric potential, current, circuits, magnetic fields, Gauss’ law, Ampere’s law, Maxwell’s equations, induction, and electromagnetic waves.
4 Units
54 Lecture hours
54 Lab hours

PHY 220
Unmanned Rocket Science
Prerequisite: PHY 211
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course introduces students to the creation and implementation of payloads and unmanned flight vehicles. The payloads and unmanned vehicles such as rockets, balloons and unmanned aerial vehicles (drones) collect inflight atmospheric data that are later analyzed and presented.
3 Units
36 Lecture hours
54 Lab hours

PHY 299
Directed Study in Physics
Advisory: PHY 150 or 160 or 211 or 212 or 213
Transfers to: CSU
The course provides an opportunity for the student to expand their studies in Physics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours

The course provides an opportunity for the student to expand their studies in Physics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.
1 to 3 Units
54 to 162 Lab hours
POLICE ACADEMY
Division of Public Safety

PAC 020
Physical Fitness
(Formerly PAC 43032)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 040
This course is designed to keep peace officers informed of physical fitness techniques, current Federal and State laws and recent requirements which affect current law enforcement procedures. Physical Fitness for officer development presents new concepts in law enforcement procedures. The curriculum follows that recommended as refresher training by the California Commission on Peace Officer Standards and Training. 0.037 to 0.741 Units
2 to 40 Lab hours

PAC 021
Firearms
(Formerly PAC 43035)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 040
This course is designed to keep peace officers informed of new firearms techniques and equipment, current Federal and State laws and recent requirements which affect current law enforcement procedures. Firearms for Officer Development present new concepts in law enforcement procedures. The curriculum follows that recommended as refresher training by California Commission on Peace Officer Standards and Training. 0.037 to 0.741 Units
2 to 40 Lab hours

PAC 022
First Aid/CPR
(Formerly PAC 43049)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 040
This course is designed to keep peace officers informed of new first aid and CPR techniques, current Federal and State laws and recent requirements which affect current law enforcement procedures. First Aid/CPR for officer development presents new concepts in law enforcement procedures. The curriculum follows that recommended as refresher training by the California Commission on Peace Officer Standards and Training. 0.148 to 2.962 Units
2 to 40 Lecture hours
2 to 40 Lab hours

PAC 023
Field Training Officer Course
(Formerly PAC 4314)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 040
This course is designed to teach a Police Officer how to train new recruits. This course includes training principles, civil liability, ethics and integrity, performance goals, principles of instruction, and role model. 0.148 to 2.962 Units
2 to 40 Lecture hours
2 to 40 Lab hours

PAC 024
Weapons, Semi-Automatic Handguns
(Formerly PAC 4342)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 040
This course is designed for personnel who are concerned with semiautomatic pistols as a police service side arm. Overall course will encompass Colt.45 semiautomatic, Smith and Wesson models M7P 9, M&P 9L, M&P 40L and M&P 45, Glock Models: 17, 21, 22, 34, and 35, Springfield Armory XD, or XDM, Beretta Models 92F and FS, Browning Hi-Power 9 millimeters, plus other uniform and off-duty semiautomatic pistols. 0.148 to 2.962 Units
2 to 40 Lecture hours
2 to 40 Lab hours

PAC 025
PC 832 Arrest
(Formerly PAC 4376)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 040
This course is designed to provide the student, employed or seeking employment in public agencies, with the skills and information necessary to satisfy state requirements for the PC 832 Firearms course which covers firearms safety, care, cleaning, shooting and qualification. This course can be taken alone or in combination with PAC 4376, PC 832 Arrest and/or PAC 4378, PC 832 Communications/Arrest to satisfy varying agency requirements. 0.148 to 2.962 Units
2 to 40 Lecture hours
2 to 40 Lab hours

PAC 026
PC 832 Firearms
(Formerly PAC 4377)
Prerequisite: PAC 025; Pursuant to Section 13511.5 of the California Penal Code, each student who is not sponsored by a local or other law enforcement agency, must submit written certification from the California Department of Justice certifying no criminal history background which would disqualify the student pursuant to Section 12021.1 P.C. Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed to provide the student employed or seeking employment in public agencies with the skills and information necessary to satisfy state requirements for the PC 832 Firearms course which covers firearms safety, care, cleaning, shooting and qualification. This course can be taken alone or in combination with PAC 4376, PC 832 Arrest and/or PAC 4378, PC 832 Communications/Arrest to satisfy varying agency requirements. 0.148 to 2.962 Units
2 to 40 Lecture hours
2 to 40 Lab hours

PAC 027
PC 832 Communications and Arrest Methods
(Formerly PAC 4378)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 025
This course is designed to provide the student employed or seeking employment in public agencies and currently have a working knowledge of the law enforcement functions with the skills and information necessary to satisfy state requirements for the PC 832 Communications and Arrest Techniques course which covers community relations, communications, report writing, arrest control and personal searches. This course can be taken alone or in combination with PAC 4376, PC 832 Arrest and/or PAC 4377, PC 832 Firearms to satisfy varying agency requirements. The curriculum follows that recommended as refresher training by the California Commission on Peace Officer Standards and Training. 0.148 to 2.962 Units
2 to 40 Lecture hours
2 to 40 Lab hours

PAC 040
Basic Police Recruit Class
Prerequisite: Medical clearance, California Department of Justice clearance for firearms training, passing scores on POST written and physical tests (agency sponsored cadets are exempt) Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement; PAC 4348L
This is a fundamental course which covers criminal law, evidence, procedure and investigation, firearms, first aid, defense tactics, use of chemical agents and other related police subjects. This course meets the educational requirement for basic
PAC 075B Basic Course-Module III (Ext)
Prerequisite: Medical clearance, California Department of Justice clearance for firearms training, passing scores on POST written and physical tests (agency sponsored cadets are exempt).
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for those interested in becoming a Level III Reserve officer. This course covers criminal law, evidence, investigations, firearms, arrest and control, vehicle operations, report writing, first aid/CPR, cultural diversity, and other related police topics. It is the level of training which satisfies the legal requirements for a Level III Reserve officer.
7 Units 99 Lecture hours 81 Lab hours

PAC 075C Basic Course - Module II (Ext)
Prerequisite: Successful completion of PAC 075B or POST Module III, current (within last 3 years) in PC 832 Arrest and Firearms training requirements, passage of the POST-constructed Comprehensive Module III End-of-Course Proficiency Test within the preceding 12 months, medical clearance, Department of Justice clearance for firearms training
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for those interested in becoming a Level II Reserve officer. This course covers criminal law, evidence, investigations, firearms, arrest and control, community relations, report writing, cultural diversity, and other related police topics. It is training which satisfies the legal requirements for a Level II Reserve officer and can be used as a prerequisite for the PAC 075D Module I course.
8.5 Units 117 Lecture hours 108 Lab hours

PAC 075D Basic Course-Module I (Ext)
Prerequisite: Successful completion of PAC 075B and PAC 075C or POST Modules III and II, current (within last 3 years) in PC 832 Arrest and Firearms training requirements, passage of the POST-constructed Comprehensive Module II End-of-Course Proficiency Test within the preceding 12 months, medical clearance, Department of Justice clearance for firearms training
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for those interested in becoming a Level I Reserve officer or a regular peace officer. This course covers criminal law, evidence, investigations, firearms, arrest and control, emergency vehicle operation, and other related police topics. It is the final level of training which constitutes satisfaction of the Regular Basic Course training requirement and the legal requirements for a Level I Reserve officer and a regular police officer in accordance with Commission on Peace Officer Standards and Training requirements. 21.5 Units 297 Lecture hours 270 Lab hours

PAC 075E Basic Academy Intensive Modular III
Prerequisite: Medical clearance, California Department of Justice clearance for firearms training, passing scores on POST written and physical tests (agency sponsored cadets are exempt).
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for those interested in becoming a Level III Reserve officer. This course covers criminal law, evidence, investigations, firearms, arrest and control, vehicle operations, report writing, first aid/CPR, cultural diversity, and other related police topics. It is the level of training which satisfies the legal requirements for a Level III Reserve officer.
7 Units 99 Lecture hours 81 Lab hours

PAC 075F Basic Academy Intensive Modular II
Prerequisite: Medical Clearance, California Department of Justice clearance for firearms training, passing scores on POST written and physical tests (agency sponsored cadets are exempt) and PAC 075E
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for those interested in becoming a Level II Reserve officer. This course covers criminal law, evidence, investigations, firearms, arrest and control, vehicle operations, report writing, first aid/CPR, cultural diversity, and other related police topics. It is the level of training which satisfies the legal requirements for a Level II Reserve officer.
8.5 Units 117 Lecture hours 108 Lab hours

PAC 075G Basic Academy Intensive Modular I
Prerequisite: Medical Clearance, California Department of Justice clearance for firearms training, Passing scores on
POLITICAL SCIENCE
Division of Behavioral & Social Sciences

POLS 110 (C-ID POLS 110)
Government of the United States
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for only one of the following courses: POLS 110 or POLS 110H)
This course surveys and analyzes the origins, principles, institutions, policies, and politics of U.S. National and California State Governments, including their constitutions. Emphasis is placed on the rights and responsibilities of citizens, and an understanding of the political processes and issues involved in the workings of government. This course fulfills the American Institutions requirement for the Associate Degree. It also is suitable for students wishing to expand their knowledge of local, state and national governments.
3 Units
54 Lecture hours

POLS 110H (C-ID POLS 110)
Government of the United States Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for only one of the following courses: POLS 110 or POLS 110H)
This course surveys and analyzes the origins, principles, institutions, policies, and politics of U.S. National and California State Governments, including their constitutions. Emphasis is placed on the rights and responsibilities of citizens, and an understanding of the political processes and issues involved in the workings of government. This course fulfills the American Institutions requirement for the Associate Degree. It also is suitable for students wishing to expand their knowledge of local, state and national governments. Further emphasis is placed on application, critical thinking and problem solving in common legal situations. This course is designed for any student wishing to learn more about the law and its interaction with democratic government and those students wishing to attend law school. It is also a requirement for any student seeking to participate in the Community College Pathway to Law School Initiative.
3 Units
54 Lecture hours

POLS 128 (C-ID POLS 120)
(same as PHIL 128)
Introduction to Political Philosophy
Advisory: ENGL 101 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is for students interested in the relationship between political systems and philosophy. It is especially relevant for students interested in political science, philosophy and law. This course introduces the history and development of political thought, and will consider the justification of the State, Libertarianism, Socialism, Communism, as well as conceptions of rights and distributions of goods.
3 Units
54 Lecture hours

POLS 128H (C-ID POLS 120)
(same as PHIL 128H)
Introduction to Political Philosophy Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is for students interested in the relationship between political systems and philosophy. It is especially relevant for students interested in political science, philosophy and law. This course introduces the history and development of political thought, and will consider the justification of the State, Libertarianism, Socialism, Communism, as well as conceptions of rights and distributions of goods. This course is designed for students who meet Honor’s Program requirements.
3 Units
54 Lecture hours

POLS 125
Law and Democracy
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course provides an examination and analysis of practical law as it affects people in daily life as citizens in a democracy. It assists in the development of skills to successfully navigate legal systems and in understanding democratic political values. Emphasis is placed on constitutional rights and civil liberties, police encounters and criminal law, local government and advocacy, small claims and traffic courts, landlord/tenant relations, family law, consumer rights, contracts, employment and immigration. Further emphasis is placed on application, critical thinking and problem solving in common legal situations. This course is designed for any student wishing to learn more about the law and its interaction with democratic government and those students wishing to attend law school. It is also a requirement for any student seeking to participate in the Community College Pathway to Law School Initiative.
3 Units
54 Lecture hours

POLS 130 (C-ID POLS 130)
Comparative Government
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course examines the political systems of selected industrial democracies, dictatorships, and governments of the developing world. Emphasis is placed on the
in institutional development and political processes and cultures within these countries. This course features an examination of current political problems and a comparison of such differing ideologies as Marxism, democracy, theocracy, and totalitarianism. This course is intended for the student interested in the study of foreign governments and for those who wish to major in political science.

3 Units
54 Lecture hours

POLS 135 (same as ECON 135)
International Political Economy
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This is an introductory course designed for students interested in economics and political science, as well as anyone interested in the global interconnectedness of the world economy. The course focuses on the relations between the political and economic systems within the global economy. The course covers the impact of political decisions on world economies and international organizations. Further emphasis is placed on a comparison-contrast of various national economies. Geographic areas of concern include Africa, Europe, the Pacific Rim, the Middle East, Latin America, Russia, China, and the United States. The course is cross-listed as Economics 135 and Political Science 135. Credit is given in either area, not both.

3 Units
54 Lecture hours

POLS 140 (C-ID POLS 140)
International Relations
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course examines the structure and operation of the international system. Emphasis is placed on the nature and sources of conflict and cooperation, issues of war and peace among states in the international system, and international economic development. The impact of nation-states, international organizations, and non-governmental actors are all examined. This course is suitable for students who wish to expand their knowledge of international politics and for those who wish to major in political science or international relations.

3 Units
54 Lecture hours

POLS 150
Chicano Politics (Same as CHST 150)
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 appropriate placement
Transfers to: UC, CSU

This course examines U.S. history and political issues relevant to the Chicano/Latino community, providing an overview of Chicano/Latino demographics in the U.S. examines Chicano/Latino political activism and the rise of Chicano/Latino political leadership. Students interested in this course may include individuals with familial or personal connections to the Chicano (Mexican-American) community and/or those intending to work in environments with high concentrations of this population.

3 Units
54 Lecture hours

POLS 299
Directed Study: Political Science
Transfers to: CSU

Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.

1 to 3 Units
54 to 162 Lab hours

PSYCHOLOGY
Division of Behavioral & Social Sciences

PSY 101 (C-ID PSY 110)
Introductory Psychology
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU

(*Students will receive credit for only one of the following courses: PSY 101 or PSY 101H)

This course is designed as a general introduction to psychology for psychology majors, those with an interest in psychology, or anyone with a desire to further their understanding of human behavior. It provides an overview of the field of psychology, introducing students to the research methods used to advance the science of psychology and the various areas that comprise this diverse discipline. Research and theories are presented, discussed, and evaluated. Topics covered include biological psychology, sensation and perception, lifespan development, learning, memory, motivation and emotion, cognition, personality, psychopathology and social psychology.

3 Units
54 Lecture hours

PSY 101H (C-ID PSY 110)
Introductory Psychology Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU

(*Students will receive credit for only one of the following courses: PSY 101 or PSY 101H)

This course is designed as a general introduction to psychology for psychology majors, those with an interest in psychology, or anyone with a desire to further their understanding of human behavior. It provides an overview of the field of psychology, introducing students to the research methods used to advance the science of psychology and the various areas that comprise this diverse discipline. Research and theories are presented, discussed, and evaluated. Topics covered include biological psychology, sensation and perception, lifespan development, learning, memory, motivation and emotion, cognition, personality, psychopathology and social psychology.

This course is intended for those who meet Honors Program requirements.

3 Units
54 Lecture hours
PSY 112 (C-ID PSY 180)  
Lifespan Development  
_Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
_Transfers to: UC (credit limit*), CSU  
(*Students will receive credit for only one of the following courses: PSY 112 or CD 106)_  
This course provides an overview of human psychological development across the lifespan. The physical, cognitive, social, and emotional changes that occur from the prenatal period through old age are addressed. In addition, current research findings and their applicability to ongoing developmental problems are explored. This course is appropriate for the student seeking to develop a better understanding of the development gains and losses that occur throughout our lives.  
3 Units  
54 Lecture hours

PSY 114 (C-ID PSY 120)  
Introduction to Abnormal Psychology  
_Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
_Transfers to: UC, CSU_  
This course provides an introduction to the study of abnormal behavior for psychology majors, those with an interest in abnormal psychology, or anyone with a desire to further their understanding of abnormality. The classification, assessment and treatment of psychological disorders will be explored. Students will not only develop an understanding of the etiology and diagnosis of such disorders, as based upon DSM-IV-TR criteria, but develop an appreciation of the cultural, historical and theoretical influences that affect the definitions and treatment of abnormal behavior.  
3 Units  
54 Lecture hours

PSY 121  
Drugs, Society, and Behavior  
_Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
_Transfers to: UC, CSU_  
This course is for the student who seeks a basic understanding of the effects of drugs of abuse and an in-depth consideration of the societal aspects of psychoactive drugs. It is designed for those students interested in furthering their understanding of psychoactive drugs and those interested in working with populations recovering from or at risk for drug problems. Current and historical uses of and attitudes towards drugs will be addressed, as well as drug use disorders, drug legislation, and treatment options. Societal and cultural differences will also be noted.  
3 Units  
54 Lecture hours

PSY 127  
Introduction to the Physiological Effects of Drugs of Abuse  
_Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
_Transfers to: UC, CSU_  
This course is designed for students interested in furthering their understanding of psychoactive drugs and those interested in working with populations recovering from or at risk for drug problems. It provides an examination of the pharmacological actions of drugs of abuse and how this relates to the physiological, as well as the behavioral, effects of such drugs. The properties of drugs that increase the likelihood of the development of substance use disorders will be emphasized.  
3 Units  
54 Lecture hours

PSY 170  
Introduction to Learning and Memory  
_Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
_Transfers to: UC, CSU_  
This course details the background and research that led to the identification of the different types of learning and memory. Students will explore topics in the field of learning and memory including but not limited to classical conditioning, operant conditioning, instrumental conditioning, short-term and long-term memory, forgetting, and models of learning and memory. This course is beneficial for students that are Psychology majors, students looking to transfer as a Psychology major and students that are interested in learning about positive psychology.  
3 Units  
54 Lecture hours

PSY 180  
Positive Psychology  
_Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement  
_Transfers to: UC, CSU_  
This course focuses on the research, theories, and ideas surrounding, promoting, and maintaining well-being, good health, and happiness. Students will explore topics in the field of positive psychology including but not limited to wellness, optimism, flow, happiness, and positive thinking. This course is beneficial for students that are Psychology majors, students looking to transfer as a Psychology major and students that are interested in learning about positive psychology.  
3 Units  
54 Lecture hours

PSY 190 (C-ID MATH 110, SOCI 125)  
Statistics for the Behavioral Sciences  
_Prerequisite: MATH 062, MATH 070 or MATH 070D or MATH 073 or appropriate placement_  
_Advisory: ENGL 101 and READ 043 or appropriate placement_  
_Transfers to: UC (credit limit*), CSU_  
(*The UC will grant credit for only one of the following courses: MATH 130 or MATH 130H or PSY 190)_  
This course provides an overview of the types of statistics that are important in the behavioral sciences. The main focus of this course is on hypothesis testing and the statistics that are used to analyze it. Students will learn to present and interpret experimental data from the behavioral sciences. Topics covered include basic probability, measures of central tendency, measures of variance, sampling, and inferential statistics. This course is designed for students majoring in psychology, sociology, political science, and anthropology. NOTE: MATH 062 or MATH 073 can be used to fulfill the prerequisite requirement for this class. Some majors require that students take MATH 073 (not MATH 062) and others do not. Students should see a counselor to determine which pathway will work best for them.  
4 Units  
72 Lecture hours

PSY 200 (C-ID PSY 200)  
Research Methods in Psychology  
_Prerequisite: PSY 101 or PSY 101H and PSY 190 or MATH 130 or MATH 130H_  
_Advisory: ENGL 101, READ 043 or appropriate placement_  
_Transfers to: UC, CSU_  
This course provides an introduction to the philosophy of science and the examination of the hypothetical deductive methods and their relationship to theory. Topics include: the nature of experimental research and design, experimental and non-experimental research-including group and single-subject designs, literature review, research ethics, collection and analysis of data, and writing APA-style reports. Collection, handling, and analysis of original empirical data, during class and outside of class, in both experimental and non-experimental designs, are an integral component of the course. The course is designed for students intending to pursue a degree in psychology.  
3 Units  
36 Lecture hours  
54 Lab hours
PSY 210 (C-ID PSY 150)
Biological Psychology
Prerequisite: PSY 101
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: PSY 210 or PSY 210H)
This course is designed for the student who has an interest in understanding the biological processes that underlie human behavior. The biological basis of normal and abnormal behavior, including sensory systems, brain and behavior relationships, and underlying neurochemical processes will be addressed. The extent to which biological processes interact with environmental influences to determine behavior will be explored. 3 Units
54 Lecture hours

PSY 210H (C-ID PSY 150)
Biological Psychology Honors
Prerequisite: PSY 101 and ENGL 101
Enrollment is restricted to those who meet Honors Program requirements (minimum GPA of 3.0)
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one of the following courses: PSY 210 or PSY 210H)
This course is designed for the student who has an interest in understanding the biological processes that underlie human behavior. The biological basis of normal and abnormal behavior, including sensory systems, brain and behavior relationships, and underlying neurochemical processes will be addressed. The extent to which biological processes interact with environmental influences to determine behavior will be explored. This course is intended for students eligible for the Honors Program. 3 Units
54 Lecture hours

PSY 299
Directed Study: Psychology
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide. 1 to 3 Units
54 to 162 Lab hours

RADIO
Division of Communications & Languages

RDIO 104
Introduction to Broadcasting
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is an introduction into the field of broadcasting in a survey form covering the vast areas of broadcasting throughout the world. It is a broad survey of the history, theory, and operation of radio and television broadcasting in the United States, including legal and social aspects, networks, programming, production, sales and advertising, and station personnel. At least one field trip to a radio or television studio will be scheduled each semester. 3 Units
54 Lecture hours

RDIO 136
Radio Production
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is intended as an introduction for students wanting to learn production and management techniques utilized in radio broadcasting. Students will be shown proper announcing and on-air presentation techniques through lecture, demonstration, and taped examples. Students will have an opportunity to air their programs over the campus Internet radio station KRHC. 4 Units
36 Lecture hours
108 Lab hours

RDIO 290
Cooperative Work Experience/Internship for Radio Related Fields
Prerequisite: RDIO 104
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in radio related fields under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in an area of radio related fields and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose intended job is related to the field of radio and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship: 1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship: 1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

RDIO 299
Directed Study: Radio
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibl-
ity for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title 5 regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college-wide.

1.5 Units
54 to 162 Lab hours

READING
Division of Communications & Languages

READ 012 Learning Strategies
Advisory: ENGL 033 or ENLA 033 or appropriate placement; READ 021 or appropriate placement
This course is designed for students entering college who need to develop their skills as learners. Students will build and acquire study techniques in the areas of note taking, test taking, text reading, memorizing, time planning and communicating. The emphasis of this class will be on learning new techniques and then applying them to classes and work situations. This is a non-degree credit course and is offered on a pass/no pass basis.
1.5 Units
27 Lecture hours

READ 021 Basic Reading
Prerequisite: Appropriate placement through the Rio Hondo Assessment process
Corequisite: READ 021L
This course is designed for students who want to improve their reading skills in order to succeed in other college classes. Students will learn how to read and understand short works of fiction and nonfiction as well as key vocabulary words associated with college and everyday life through context clues, word parts, and dictionary usage. Students will also learn to recognize transitions, main ideas and supporting details. This is a non-degree applicable course and is offered on a pass/no pass basis. All students are required to concurrently enroll in the Reading Lab, READ 021L.

3 Units
54 Lecture hours

READ 021L Reading Lab
Prerequisite: Appropriate placement through the Rio Hondo Assessment process
Corequisite: READ 021
This course is a skills class designed to assist students in improving reading comprehension and vocabulary through individually prescribed lab work. Students will complete reading tasks designed to complement the activities of their reading course. All READ 021L students must enroll. This is a non-degree applicable course offered on a pass/no pass basis.
0.5 Units
27 Lab hours

READ 022 Intermediate Reading Skills
Prerequisite: READ 021 and READ 021L or appropriate placement through the Rio Hondo assessment process
Corequisite: READ 022L
This course is designed for students who want to improve their reading skills in order to succeed in other college classes. Students will develop comprehension and vocabulary through the reading of material drawn from popular works, textbooks, magazines, and newspapers. Areas addressed include determining main ideas, recognizing supporting details, identifying author’s organization, and making inferences. This is a non-degree credit course and is offered on a pass/no pass basis. All students are required to concurrently enroll in READ 022L.

3 Units
54 Lecture hours

READ 022L Reading Lab
Prerequisite: READ 021 or appropriate placement through the Rio Hondo assessment process
Corequisite: READ 022
This course is a skills class intended to assist students in improving reading comprehension and vocabulary through individually prescribed lab work. Students will complete reading tasks designed to complement the activities of their reading course. All READ 022 students must enroll. This is a non-degree applicable course offered on a pass/no pass basis. All students are required to concurrently enroll in the Reading Lab, READ 022L.

3 Units
54 Lecture hours

READ 043 Reading College Textbooks
Prerequisite: READ 022 or READ 022L or appropriate placement through the Rio Hondo College assessment process
This is a course designed for students entering college who need to improve their reading competencies in order to succeed in other college classes. Areas of emphasis will include reading strategies essential in such academic areas as social sciences, science, technology, business and humanities. The course also introduces academic vocabulary. 3 Units
54 Lecture hours

READ 044 Learning Strategies for Composition and Research
This course is designed for students entering college who need to develop their composition and research skills. Students will build and acquire study techniques in the areas of note taking, test taking, text reading, memorizing, time planning and communicating. The emphasis of this class will be on learning new techniques and then applying them to classes and work situations.
1.5 Units
27 Lecture hours

READ 101 Critical Reading
Prerequisite: READ 043 or appropriate placement through the Rio Hondo College assessment process
Advisory: ENGL 035 or ENLA 100 or appropriate placement
Transfers to: CSU
This course is designed to aid students in acquiring critical reading and thinking skills across the disciplines. Emphasis is placed on the ability to analyze and evaluate material by establishing thesis and support as well as by analyzing elements of argumentation. The course also focuses on vocabulary and the effects of language on the reader.
3 Units
54 Lecture hours

READ 134 Academic Success and Lifelong Learning
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This comprehensive course is designed for students to acquire reading and study strategies for col-
Introduction to Sociology Honors

**SOC 101H (C-ID SOCI 110)**

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU

This course is designed for those with an interest in Sociology, or anyone with a desire to further their understanding of human group behavior and the organization of society. The student, using several theoretical points of view, will study and analyze: (1) the organization of social life; (2) problems of inequality - of age, sex, race and ethnicity, social class and life style; (3) the basic social institutions: family, education, politics, economics, and religion; and (4) global issues of population, technology, social movements and social change. This course is intended for students eligible for the Honors Program.

3 Units
54 Lecture hours

SOCIOLOGY

Division of Behavioral & Social Sciences

**SOC 101 (C-ID SOCI 110)**

Introduction to Sociology

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU

This course is designed for those with an interest in Sociology, or anyone with a desire to further their understanding of human group behavior and the organization of society. The student, using several theoretical points of view, will study and analyze: (1) the organization of social life; (2) problems of inequality - of age, sex, race and ethnicity, social class and life style; (3) the basic social institutions: family, education, politics, economics, and religion; and (4) global issues of population, technology, social movements and social change.

3 Units
54 Lecture hours

**SOC 102 (C-ID SOCI 115)**

Major Social Problems

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed to provide students with an understanding of the definition, development, reduction and elimination of major social problems in contemporary society. Topics addressed include problems of mental and physical health including addictions, crime and violence, social inequality, terrorism and war, as well as technology and the environment. Various social theories and relevant empirical research are critically examined throughout the course.

3 Units
54 Lecture hours

**SOC 102H (C-ID SOCI 115)**

Introduction to Human Sexuality

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed for students interested in the social scientific study of human sexuality. The course provides students with knowledge about the processes and variation in sexual functions, reproduction, intimate relationships, sexual and gender role development and sexual activities. Numerous factors involved in human sexuality are explored, emphasizing sexuality as a form of human interaction. The social, cultural, and historical contexts of human sexuality will be critically analyzed.

3 Units
54 Lecture hours

**SOC 105 Introduction to Human Sexuality**

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed for students interested in the social scientific study of human sexuality. The course provides students with knowledge about the processes and variation in sexual functions, reproduction, intimate relationships, sexual and gender role development and sexual activities. Numerous factors involved in human sexuality are explored, emphasizing sexuality as a form of human interaction. The social, cultural, and historical contexts of human sexuality will be critically analyzed.

3 Units
54 Lecture hours

**SOC 105H Introduction to Human Sexuality**

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed for those with an interest in Sociology, or anyone with a desire to further their understanding of human group behavior and the organization of society. The student, using several theoretical points of view, will study and analyze: (1) the organization of social life; (2) problems of inequality - of age, sex, race and ethnicity, social class and life style; (3) the basic social institutions: family, education, politics, economics, and religion; and (4) global issues of population, technology, social movements and social change.

3 Units
54 Lecture hours

**SOC 110 Human Sexuality from a Cross-Cultural Perspective (Same as ANTH 110)**

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed for students with an interest in human sexuality from a cross-cultural perspective. Sexual anatomy, development, response, and behavior will be examined, along with historical and cultural patterns. Students will learn about the development and expression of gender and orientation from both Western and non-Western perspectives, with an emphasis on the influence of culture on individuals.

3 Units
54 Lecture hours

**SOC 111 (C-ID SOCI 130)**

Marriage, Family and Intimate Relationships

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

This course is designed for the student interested in examining, from a sociological perspective, issues such as marriage, family, and emerging alternative life styles which constitute the reality of life today. The course explores love, sexuality, mate selection, and engagement preceding traditional marriage and family patterns, extra-marital and non-marital unions, singles, and future trends in intimate relationship styles.

3 Units
54 Lecture hours

**SOC 112 (C-ID SOCI 140)**

Perspectives of Sex & Gender

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU

In this course we will explore how gender shapes our lives and the world around us. Using a sociological perspective, we will examine gender as a social construction rather than a simple biological difference. Topics to be covered may include cultural ideas of gender, gender and the economy, politics, the media, families, and education. This course is designed for students who want to learn more about the social connections of gender and how the importance of gender differences are strengthened in our society today.

3 Units
54 Lecture hours
**SOC 127 (C-ID SOCI 160)**
Introduction to Criminology

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

Transfers to: UC, CSU

This course is designed for students interested in the subject of criminology. The scientific analysis of the nature, extent, and causes of violations of societal rules of behavior that are formally defined as crime and delinquency will be emphasized. The course includes an analysis of the development of criminal law and the administration of criminal justice, the patterns of criminality and delinquency, the impact of crime on social change, and the labeling, identification, characteristics, and treatment of criminals and delinquents. 

3 Units

54 Lecture hours

**SOC 130**
Introduction to Disability Studies

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

Transfers to: CSU

This course will introduce the topic of disability studies from a sociological perspective. Students will learn the definitions and distinctions of the study of disabilities which include various theories and models of disability. The course is designed for students who want to learn about the connections between disability and society including: the culture of disability and ableism, the relationship between disability and various social institutions, and the intersectional relationship between disability and other marginalized groups. 

3 Units

54 Lecture hours

**SOC 148**
La Chicana: The Contemporary Mexican-American Female (Same as CHST 148)

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

Transfers to: UC, CSU

This introductory course explores the racial/ethnic identity formation of Chicanas/Mexican-origin women in the United States. Course themes include an examination into the genesis of the term “Chicana”, the emergence of Chicana feminism, and the intersection of race, gender, class, and sexuality in relation to the formation and study of Chicana identities. 

This course is an interdisciplinary one, drawing on methodologies from racial/ethnic studies, women/gender studies, queer studies, history, literature, sociology, and popular culture. This course is appropriate for students interested in furthering their understanding of the social construction of the Mexican American woman. 

3 Units

54 Lecture hours

**SOC 299**
Directed Study in Sociology

*Prerequisite: SOC 101*

*Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement*

Transfers to: CSU

The course provides an opportunity for the student to expand their studies in Sociology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide. 

1 to 3 Units

54 to 162 Lab hours

**SOC 325**
Analysis of Social Change

*Prerequisite: ENGL 201, SOC 101 or SOC 101H, SOC 102*

This upper division general education course is designed for students pursuing a Bachelor of Science degree in Automotive Technology and is open to all of those students who have successfully completed the required prerequisites. Students will develop a broad understanding of social change within society through the examination of the various social mechanisms that lead to, promote, and eventually incorporate or quell the products and processes of social change. Special attention will be paid to industrialization, globalization, social movements, the implementation and evolution of technology and how social change is shaped by and produces unique social behavior. 

3 Units

54 Lecture hours

**SPANISH**

**Spanish Division of Communications & Languages**

**SPANISH 101 (C-ID SPAN 100)**

**Spanish I**

*Prerequisite: SPAN 101, or completion of two years of high school Spanish with a grade of “C” or better*

*Advisory: READ 043 or appropriate placement; ENGL 035 or ENLA 100 or appropriate placement*

Transfers to: UC (credit limit), CSU

(*Students will receive credit for only one of the following sequences of courses: SPAN 101 and SPAN 102 or SPAN 101S and SPAN 102S*)

This course is an introduction to the essentials of Spanish language: reading, listening, speaking, and writing skills. Various facets of Spanish-speaking cultures will be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those students who do not have a Spanish language background who wish to learn to speak Spanish or who seek a degree in the Spanish language. 

4.5 Units

72 Lecture hours

27 Lab hours
SPAN 101 and SPAN 102 or SPAN 101S and SPAN 102S

This course is a continuation of the study of the essentials of Spanish language: reading, listening, speaking, and writing skills. The skills learned in SPAN 101 will be reviewed. The class will increase vocabulary, grammar, and cultural knowledge to improve on the reading, listening, speaking, and writing skills presented in SPAN 101. In this course the study of verb tenses and constructions is completed. Various facets of Spanish-speaking cultures will be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those students who do not have a Spanish language background who wish to learn to speak Spanish or who seek a degree in the Spanish language.

4.5 Units
72 Lecture hours
27 Lab hours

SPAN 201 (C-ID SPAN 200)

Spanish III

Prerequisite: SPAN 102 or SPAN 102S or completion of three years of high school Spanish

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: UC (credit limit*), CSU

(*Students will receive credit for only one of the following courses: SPAN 201 or SPAN 201H)

This is an intermediate level course in which Spanish grammar is reviewed. It includes intensive practice in conversation and composition. Many aspects of Spanish culture are introduced in short stories by Latin-American and Spanish authors. Students strengthen their communications and written skills by analyzing these stories in Spanish. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those students who wish to broaden their knowledge in Spanish as well as for those seeking a degree in the Spanish language.

4.5 Units
72 Lecture hours
27 Lab hours

SPAN 102S (C-ID SPAN 110)

Spanish for Spanish Speakers II

Prerequisite: SPAN 101S

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: UC (credit limit*), CSU

(*Students will receive credit for only one of the following courses: SPAN 101 and SPAN 102 or SPAN 101S and SPAN 102S)

This course is a continuation of the essentials of the Spanish language: reading, listening, speaking, and writing skills. The skills learned in Spanish 101S will be reviewed. The class will increase vocabulary, grammar, and cultural knowledge to improve on the reading, listening, speaking, and writing skills presented in Spanish 101S. In this course, the study of verb tenses and constructions is completed. It is designed to further language skills of students with a Spanish language background. Various facets of Spanish-speaking cultures will be analyzed via cross-cultural comparisons. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those students who do have a Spanish language background and want to develop a better written and oral competency in the language, or who seek a degree in the Spanish language.

4.5 Units
72 Lecture hours
27 Lab hours

SPAN 202 (C-ID SPAN 210)

Spanish IV

Prerequisite: SPAN 201 or 201H, or completion of four years of high school Spanish with a grade of “C” or better

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

Transfers to: UC, CSU

This course is the continuation of SPAN 201. SPAN 202 is an intermediate level course in which Spanish language and culture is reviewed. It stresses written and oral proficiency as well as reading comprehension and composition. Many aspects of Spanish culture, literature, and history are analyzed in readings by Latin American and Spanish authors. Students strengthen their communication and writing skills by analyzing these stories in Spanish. In addition to classroom discussion, students are required to complete at least 27 hours of intensive individualized oral-aural practice in the Language Laboratory via interactive websites, audio CDs, video programs, and films. The Language Laboratory work focuses on vocabulary, grammar, and cultural practices. This class is designed for those students who wish to broaden their knowledge in Spanish as well as for those interested in pursuing a degree in the Spanish language.

4.5 Units
72 Lecture hours
27 Lab hours

SPAN 299

Directed Study: Spanish

Transfers to: CSU

Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing
depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester. Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide. 1 to 3 Units 54 to 162 Lab hours

SPEECH

Division of Communications & Languages

SPCH 100 (C-ID COMM 130) Interpersonal Communication
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement Transfers to: UC, CSU
Interpersonal Communication is an introductory course focusing on interactions between two people. Designed to provide students with greater understanding of communication in every day activities, the course focuses on self-discovery and strengthening the self-image; discovering and understanding the factors that influence communication behavior; and the establishment and maintenance of meaningful relationships in professional and social settings. This course is designed for speech communication majors or anyone with an interest in human communication.
3 Units 54 Lecture hours

SPCH 101 (C-ID COMM 110) Public Speaking
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement Transfers to: UC (credit limit*), CSU (*Students will receive credit for only one of the following courses: SPCH 101, SPCH 101H or SPCH 102)
This introductory course is designed to prepare students to be effective oral communicators in all aspects of public presentations including design and delivery of the public speech. The course is appropriate for all students interested in developing their public speaking knowledge and skills such as speech communication majors, future teachers, and future business leaders.
3 Units 54 Lecture hours

SPCH 101H (C-ID COMM 110) Public Speaking Honors
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU (*Students will receive credit for only one of the following courses: SPCH 101, SPCH 101H or SPCH 102)
This introductory course is designed to prepare students to be effective oral communicators in all aspects of public presentations including design and delivery of the public speech. The course is appropriate for all students interested in developing their public speaking knowledge and skills such as speech communication majors, future teachers, and future business leaders. This course is designed for students eligible for the Honors Program.
3 Units 54 Lecture hours

SPCH 110 (C-ID COMM 160B) Forensics: Speech and Debate Team
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement; Prior or concurrent enrollment in SPCH 101 or SPCH 101H or SPCH 130 or SPCH 140 Transfers to: CSU
This course trains students to participate in Rio Hondo’s Forensic Speech and Debate Team. Emphasis is placed on preparation, including research and writing; practice; and participation in intercollegiate speech and debate tournaments and/or community events. Students learn debate, oral interpretation, limited preparation, and platform speaking. This course is appropriate for students specializing in areas involving public speaking such as law, political science, drama, and instruction. Students who sign up for the lab hours are required to compete. This course may be taken once and repeated three times for credit.
1 to 4 Units 18 Lecture hours 54 to 162 Lab hours

SPCH 111 Forensics: Debate Research and Practice
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement Transfers to: CSU
This course involves participation in Rio Hondo’s Forensic Debate Team. Students research, structure, and present debate cases. Students in this course will improve their ability to debate at intercollegiate debate tournaments. Emphasis is placed on successful participation in National Parliamentary Debate Association (NPDA) sanctioned tournaments. This course is recommended for students preparing for careers in law, political science, or community advocacy. This course may be taken once and repeated three times for credit.
2 Units 108 Lab hours

SPCH 112 Forensics: Oral Interpretation Laboratory
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement Transfers to: CSU
This course is designed to train students in the analysis and performance of literature at speech events attended by the Forensic Speech Team. Students develop skills to interpret and perform literature ranging from the play, screenplay, short story, novel, and poetry. Students gain an understanding of character and scene analysis as it applies to an oral interpretation performance. This course is recommended for students specializing in communication, performance studies, and creative literature. This course may be taken once and repeated three times for credit.
2 Units 108 Lab hours

SPCH 130 (C-ID COMM 170) Oral Interpretation
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement Transfers to: UC, CSU
This communication course focuses on the oral performance of various forms of literature, such as poetry, prose, and drama. The skills needed for making such public performances will be addressed and student knowledge of the various forms of literature will be enhanced. Emphasis is placed on creating the essence of characters in a text through facial, vocal, and kinetic methods. This course is appropriate for speech majors or anyone interested in public performance and literature.
3 Units 54 Lecture hours

SPCH 132 Readers Theatre
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement Transfers to: CSU
This is a creative communication course focusing on group presentations of literature. Students will perform pose, drama, and/or poetry in groups so that a communicative
message emerges and fosters imagina-
tive responses in the minds of an
audience. Emphasis is placed on the
fusion between rhetoric, interpreta-
tion and acting. Readers Theatre is
designed for Speech Communication
majors and those interested in litera-
ture and performance.

3 Units
54 Lecture hours

SPCH 140 (C-ID COMM 120)
Argumentation and Debate
Advisory: ENGL 035 or ENLA 100 or
appropriate placement; READ 043 or
appropriate placement
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one
of the following courses: SPCH 140 or
SPCH 240)
This course is an introduction to
the principles and techniques of
argumentation and debate. Effective
methods of research, critical analysis,
reasoning, refutation, and listening
are stressed. Through debate
participation and analysis, students
will gain the knowledge and skills to
advocate and refute argumentative
positions. This course is particularly
appropriate for students anticipating
entering occupations where argu-
mentation, negotiation, and issue-
analyses are likely to occur.

3 Units
54 Lecture hours

SPCH 150 (C-ID COMM 150)
Intercultural Communication
Advisory: ENGL 035 or ENLA 100 or
appropriate placement; READ 043 or
appropriate placement
Transfers to: CSU
This course is an introduction to
intercultural communication. The
emphasis is on applying intercultural
theories and concepts to understand
the influence of cultural membership
upon the communicative situation.
Students completing this course will
improve their intercultural communi-
cation competence. This course is rec-
commended for students in all fields;
particularly Communication Studies
majors and students who anticipate
high interaction with people from
diverse cultures.

3 Units
54 Lecture hours

SPCH 240 (C-ID COMM 190)
Argumentation and Discussion
Prerequisite: SPCH 140
Transfers to: UC (credit limit*), CSU
(*Students will receive credit for only one
of the following courses: SPCH 140 or
SPCH 240)
This course gives the student
expanded practice and theory in
argumentation. Students further
develop their argumentation knowl-
edge and skills through debate partic-
ipation, observation, and discussion.

This course is particularly appropri-
ate for students anticipating enter-
ing occupations involving extensive
argumentation and deliberation such
as law, communication, negotiation,
and any area where argumentation
and debate occur frequently.

3 Units
54 Lecture hours

TECHNICAL
EDUCATION
Division of Career &
Technical Education

TCED 044
OSHA 10 for the Workplace
Advisory: READ 043 or appropriate
placement
This course is intended for the indi-
vidual who needs an overview and/
or certification of both the California
and Federal OSHA Safety Regula-
tions for the General Industry Work-
place or Construction Workplace.
This course will cover a detailed over-
view of the rules and regulations, and
discuss fire protection and preven-
tion, material handling/storage/use
and disposal, hand and power tools,
welding and cutting, electrical safety,
and fall protection. Upon completion
of this course, (as well as passing the
final exam), the student will receive
a 10-hour OSHA Training Certificate
of Completion and/or Department of
Labor card.
1 Unit
18 Lecture hours

TCED 054
OSHA Workplace Safety II
Advisory: READ 043 or appropriate
placement
This course is intended for the indi-
vidual who needs an intermediate-
level overview and/or the number
of hours required for certification
of both the California and Federal
OSHA Safety Regulations for the
General Industry and Construction
Workplace. The course will cover a
detailed overview of the rules
and regulations, fire protection and
prevention, material handling/storage
and disposal, hand and power tools,
welding and cutting, electrical safety,
fall protection, scaffolds, excavations,
concrete and masonry construction,
steel erection, demolition, cranes/
hoists/elevators and conveyors,
lockout/tagout procedures, indus-
trial hygiene and emergency action
plans. Powered Industrial Trucks will
also be covered during the course,
meeting the requirement for OSHA
Standard 1910.178. Upon completion
of this course, (as well as passing the
final exam and the powered
industrial trucks operator safety
training), the student will receive a
30-hour OSHA Training Certificate
of Completion, which is good for life,
and a powered industrial truck Certi-
fied Operator Card, which is good for
3 years.
4 Units
72 Lecture hours

TCED 060
Elementary Metallurgy
Advisory: ENGL 035 or ENLA 100 or
appropriate placement; READ 043 or
appropriate placement
This is an elementary course in the
basic principles of metallurgy. It is
designed for Welding and Machine
Shop majors, but is suitable for all
technology students. Emphasis is
placed on terminology, numbering
systems, methods of altering the
properties of metals, and the effect on
fabrication.
2 Units
36 Lecture hours

TCED 090
Blueprint Reading for Industry
Advisory: ENGL 035 or ENLA 100 or
appropriate placement; READ 043 or
appropriate placement
This course is for all students in-
terested in pursuing certificates, degrees
and careers related to manufacturing,
welding, and drafting technologies.
The course presents an introduction
to the use of engineering documents
or blueprints as used in industrial
applications and focuses on inter-
preting and visualizing technical
drawings in order to read and under-
stand “The Language of Industry.”
Principles of reading drawings,
specifications, projection principles,
working drawings, details, assem-
bles, and pictorial representations
are examined and discussed. The
course is also helpful for apprentices
and employees in all areas of technol-
ogy including planning, purchasing,
machine trades, welding/fabrication,
future engineers, and inspection.
2 Units
27 Lecture hours
27 Lab hours

TCED 299
Directed Study in Technical Education
Prerequisite: 2.5 overall grade point
average, a 3.0 grade point average in
the discipline of study being requested,
or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or
appropriate placement; READ 043 or
appropriate placement
Transfers to: CSU
This course provides an opportu-
nity for the student to expand their stud-
ies in Technical Education beyond
the classroom by completing a project
or an assignment arranged by an
agreement between the student and
instructor. The student is required to contract with the instructor to determine the scope of the assignment and the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide. 

1 to 3 Units
54 to 162 Lab hours

TELEVISION
Division of Arts & Cultural Programs

TV 135
Creative Digital Video
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This is a basic course in film-style production techniques for drama and music videos. Topics will include creating a story treatment, script writing, storyboarding, camera handling, lighting, audio, and simple editing. Students will work in teams and crew all positions, including writer, producer, director, 1st assistant director, 2nd assistant director, lighting director, gaffer, camera operator, boom operator, and editor. Emphasis will be placed on defining the content, structure, and style of the production. This course may be of interest to students interested in both film and television production.
3 Units
36 Lecture hours
54 Lab hours

TESLA
Division of Career & Technical Education

TESL 100
Tesla Student Automotive Technician (START) Program
Prerequisite: AUTO 265
Transfers to: CSU
This course is intended to educate the entry-level technician to the technology used in Tesla motors. Topics will include: safety when working in or around high voltage, maintenance, regenaration braking, inverter power transfer, battery technologies, battery management systems, high voltage bus and charging, pack connector and penthouse controls, and autonomous technology. Electric vehicle applications and their integrated systems from Tesla motors will be used to discuss physics of battery storage, material composition, and high-voltage generation systems. This course is suitable for students already working in the battery electric/hybrid vehicle and energy technology field. The Tesla START program provides students with the skills necessary for a successful career with Tesla.
15 Units
162 Lecture hours
324 Lab hours

THEATRE
Division of Arts & Cultural Programs

THTR 101 (C-ID THTR 111, THTR 112)
Theatre Arts Appreciation
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student interested in an overview of the entire field of theatre. The practice and theory of the following will be explored: costume, set and lighting design, acting, directing, playwriting, criticism, play structure, theatre architecture and producing. Included will be a brief historical overview. At least one field trip to a professional theatre production will be organized.
3 Units
54 Lecture hours

THTR 105 (C-ID THTR 113)
The History and Development of the Theatre
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
("Students will receive credit for only one of the following courses: THTR 105 or THTR 105H")
This course is designed for the student interested in the history and development of theatre. It will cover humanity’s relationship with theatre from primitive tribal cultures through today's large musicals and blockbuster hits. The class explores the way societies' religious, political and social structures were presented and shared through their theatre. The class will investigate major plays, playwrights and historic theatrical techniques through lectures, discussion, field trips and films. This course is designed for students eligible for the Honors program.
3 Units
36 Lecture hours
54 Lab hours

THTR 110 (C-ID THTR 151)
Principles of Acting
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who is interested in acting, and other areas of theatre, film and Television, whether as a profession or as a hobby. The class explores the theory, practice and techniques of acting. Emphasis is placed on theatre games and exercises culminating in the presentation of scenes from contemporary dramatic literature.
3 Units
36 Lecture hours
54 Lab hours

THTR 111 (C-ID THTR 152)
Principles of Acting
Prerequisite: THTR 110
Transfers to: UC, CSU
This course is for the student who wants to continue the exploration of theories and techniques used in preparation for the interpretation of drama through acting. The emphasis will be placed on deepening the understanding of the acting process through exercises, character analysis, monologues, and scenes.
3 Units
36 Lecture hours
54 Lab hours

THTR 105H (C-ID THTR 113)
The History and Development of the Theatre
Prerequisite: ENGL 101
Advisory: READ 043 or appropriate placement
Transfers to: UC (credit limit*), CSU
("Students will receive credit for only one of the following courses: THTR 105 or THTR 105H")
This course is designed for the student with an interest in history of the theatre. It will cover humanity’s relationship with theatre from primitive tribal cultures through today’s large musicals and blockbuster hits. The class explores the way societies’ religious, political and social structures were presented and shared through their theatre. The class will investigate major plays, playwrights and historic theatrical techniques through lectures, discussion, field trips and films. This course is designed for students eligible for the Honors program.
3 Units
54 Lecture hours

2019-2020 Catalog Rio Hondo College / 435
with Career advice such as photos and resumes, agents, unions, auditioning & showcases. Students will work with the camera and review the results to develop their skills.

3 Units
36 Lecture hours
54 Lab hours

THTR 150 (C-ID THTR 171)
Stagecraft I for Theatre, TV, and Film
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
The course is designed for the student who wishes to gain a basic understanding of the technical phases of scene production including construction, painting, rigging, placement and manipulation of stage scenery, lighting equipment, sound equipment, properties and wardrobe as well as the organization and management of stage activity and stagecraft terminology. The student will study the aesthetics and practical application principles of stage scenic, sound and lighting design. Students are assigned a specific crew responsibility that directly relates to a college theatre production.
3 Units
18 Lecture hours
108 Lab hours

THTR 151
Stagecraft II for Theatre, TV, and Film
Prerequisite: THTR 150
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wishes to expand the skills and concepts acquired in Stagecraft I for Theatre, TV, and Film (THTR 150). Topics such as the technical phases of scene production including construction, painting, rigging, placement and manipulation of stage scenery, lighting equipment, sound equipment, properties and wardrobe as well as the organization and management of stage activity and stagecraft terminology are revisited and expanded upon. The student will additionally do extensive study of the aesthetics and practical application principles of set design, sound design, and lighting design. Students are assigned a specific crew duty such as light board operator, sound operator or stage crew lead with added responsibility that directly relates to a college theatre production.
3 Units
18 Lecture hours
108 Lab hours

THTR 152
Stagecraft III for Theatre, TV, and Film
Prerequisite: THTR 151
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wishes to further expand the skills and concepts acquired in Stagecraft I and II for Theatre, TV and Film (THTR 150 and 151). Technical phases of scene production including construction, painting, rigging, placement and manipulation of stage scenery, lighting equipment, sound equipment, properties and wardrobe as well as the organization and management of stage activity and stagecraft are examined in greater depth. The student will complete an in depth study of the theatrical design process designing scenery, properties, lighting and/or sound for Rio Hondo College theatrical productions. Students are assigned a specific crew lead with supervisory responsibility that directly relates to a college theatre production.
3 Units
18 Lecture hours
108 Lab hours

THTR 153 (C-ID THTR 173)
Lighting Design and Production for Theatre, TV, and Film
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Prerequisite: THTR 150
Transfers to: UC, CSU
This course is designed for the student who wants to gain an understanding and appreciation of the roles light and lighting design play in the theatrical production. Students will gain understanding in lighting design theory, function and esthetics. Students will be able to hang, focus, color, cable and strike conventional and automated lighting fixtures as well as identify and select appropriate types of lighting fixtures, cables, control and power distribution equipment for a given purpose. Electrical and operational safety will receive special emphasis. Students will be able to operate lighting consoles at a proficient level.
3 Units
18 Lecture hours
108 Lab hours

THTR 159 (C-ID THTR 192)
Stage Crew Activity
Advisory: READ 022 or appropriate placement
Transfers to: UC, CSU
The course is designed for the student to gain practical hands on technical experience working backstage on Arts and Cultural Programs approved public performances of theatrical, musical or dance productions and is taken in conjunction with Technical Theatre courses. The course may be taken once and repeated three times for credit.
1 to 3 Units
54 to 162 Lab hours

THTR 160
Introductory Playwriting Screenwriting
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for the student interested in the art of writing for theatre or film. It will include writing exercises, theatre field trips and a final staged reading of finished scripts. Students will complete a one-act or 10-minute play which will be considered for production the following semester.
3 Units
36 Lecture hours
54 Lab hours

THTR 161
Playwriting Screenwriting for Production
Prerequisite: THTR 160
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for the student who wants to work on their playwriting/screenwriting craft with an eye to the professional market. Students will write, rewrite and polish works written with the inten-
THTR 164 Theatre Production Lab I
Corequisite: THTR 150
Advisory: READ 022 or appropriate placement
Transfers to: CSU
This class is intended for students interested in exploring a career in entertainment production. The course provides a hands-on introduction to all aspects of entertainment production, including scenery, lighting, audio, costumes and properties. The student will learn the fundamentals of constructing, painting and rigging scenery, hanging and focusing lighting equipment, setting up audio systems and/or building costumes or props for the performing arts programs at Rio Hondo College.
1 to 2 Units
54 to 108 Lab hours

THTR 165 Theatre Production Lab II
Prerequisite: THTR 164
Corequisite: THTR 151
Transfers to: CSU
This class is intended for students interested in careers in entertainment production. The course builds upon the basic skills acquired in THTR 164, with more sophisticated tasks and greater responsibilities in scenic construction, painting and rigging, stage lighting operations, stage audio systems and/or costume shop assignments for the performing arts programs at Rio Hondo College.
1 to 2 Units
54 to 108 Lab hours

THTR 166 Theatre Production Lab III
Prerequisite: THTR 165
Corequisite: THTR 152
Transfers to: CSU
This class is intended for students pursuing careers in entertainment production. The course builds upon the skills acquired in THTR 165, providing leadership roles in scenic construction, painting and rigging, stage lighting operations, stage audio systems and/or costume shop assignments for the performing arts programs at Rio Hondo College.
1 to 2 Units
54 to 108 Lab hours

THTR 170 (C-ID THTR 191) Theatre Rehearsal and Performance
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: UC, CSU
This course is for the student who wants to participate in a stage production that is part of the American College Theatre Festival (ACTF) competition. Students will be adjudicated by judges representing ACTF during public performances at Rio Hondo and some will be chosen to compete at the regional and national festivals in the areas of acting, writing, stage managing, directing and stage design. Students are given an opportunity to be part of a theatre company in the organization of full-length and/or one-act plays under the guidance of a faculty director. This course may be repeated three times for credit.
3 Units
18 Lecture hours
108 Lab hours

THTR 171 Musical Theatre Rehearsal and Performance
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wants to participate in a musical production. A musical is a theatrical presentation of both music and drama. In this class the student will gain a basic understanding of the technical aspects involved in staging musical theatre productions. Students will be part of a full-length production that is part of the American College Theatre Festival (ACTF) competition. Students will be adjudicated by judges representing ACTF during public performances at Rio Hondo College and some will be chosen to compete at the regional and national festivals in the areas of acting, singing, stage managing, directing and stage design. Students are given an opportunity to be part of a theatre company in the organization of full-length and/or one-act plays under the guidance of a faculty director. This course may be repeated three times for credit.
3 Units
18 Lecture hours
108 Lab hours

THTR 172 Performing and Preparing the Comedy
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; THTR 110 or THTR 150
Transfers to: UC, CSU
This course is designed for the student who wants to study aspects of theatre production as they are created and expressed through comedic drama. The class will explore comedy genres, acting techniques, physical communication and comic objectives. Students will be part of a full-length or one-act production or a combination of both. Students may participate in a variety of activities including acting, directing, production management, etc. Auditions will determine the specific assignment.
3 Units
18 Lecture hours
108 Lab hours

THTR 173 Rehearsal and Performance: The Style Play
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; THTR 110 or THTR 150
Transfers to: UC, CSU
This course is designed for the student who wants to learn how to use performance styles and acting techniques in the preparation and performance of a play with a specific style of theatricality. These plays could include the styles of Comedy of Manners, Melodrama, Surrealism, Realism, Expressionism, Futurism and more. Students will be involved rehearsing a full-length or short play and then presenting it to a public audience. Students may participate in a variety of activities including acting, directing, management, dramaturg, etc. Auditions and/or interview will determine most of the specific assignments.
3 Units
18 Lecture hours
108 Lab hours

THTR 174 Costume Design and Production for Theatre, TV, and Film
Prerequisite: THTR 150
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who seeks to gain an understanding and appreciation of costume techniques used for the theatre and other entertainment industries. The student will gain the practical knowledge and experience necessary to work in a costume shop; an understanding of costume history; basic costume design including sketching; basic costume construction including alteration and sewing; costume design tools, materials, fabrics, textiles, and crafts; costume sourcing practices; and, backstage costume preparation and practices for productions. Students will be able to identify period costumes (garments and accessories), analyze the effectiveness of costumes in a production, draft a pattern in order to sew/construct...
a garment, and source costumes needed for a production through vendors.

3 Units
36 Lecture hours
54 Lab hours

THTR 175
The Original Play in Production
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; THTR 110 or THTR 150 or THTR 160
Transfers to: UC, CSU
This course is designed for the student who wants to be part of the process involved in the creation of a new play. The class will explore how plays are structured and how characters fleshed out by living actors affect the development of new theatre. Playwrights, actors, directors and designers will learn how to collaborate with each other. Students will be involved in a new full-length, one-act, or devised play. Students may participate in a variety of activities including acting, directing, production, management, playwriting, dramaturg, etc. Auditions will determine most of the specific assignments.

3 Units
18 Lecture hours
108 Lab hours

THTR 180
Touring Theatre Local I
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wishes to gain a basic understanding of the rigorous requirements of touring a theatre production, including acting, lighting, and maintaining props, costumes and sets. Students are assigned a specific responsibility that directly relates to a production that tours locally.

2 to 4 Units
18 to 36 Lecture hours
54 to 108 Lab hours

THTR 181
Touring Theatre Local II
Prerequisite: THTR 180
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wishes to expand the skills and concepts acquired in THTR 180 regarding the rigorous requirements of touring a theatre production, including acting, directing, scenic design, management, lighting, construction and maintenance of props, costumes and sets. Students are assigned a specific responsibility that directly relates to a production that tours locally.

2 to 4 Units
18 to 36 Lecture hours
54 to 108 Lab hours

THTR 186
Touring Theatre: The American College Theatre Festival
Prerequisite: THTR 170, THTR 172, THTR 173, or THTR 175
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This class is for the student who wants to compete against students at other colleges for theatre scholarships and recognition. It is open to those who have been nominated for an Irene Ryan scholarship, a Design, Stage Managing, Directing or Playwriting award or have been chosen as a partner or are part of an officially invited production or scene. The first part of the class the student will prepare for the competition and the last part of the class will be the trip to the festival. Usually in the 2nd week of February, the festival takes place in either California, Arizona, Utah, Nevada or Hawaii. At the festival the student will compete in their nominated area, see invited plays, audition for plays and attend a variety of workshops under the supervision of the instructor. This course may be repeated three times for credit.

2 to 4 Units
18 to 36 Lecture hours
54 to 108 Lab hours

THTR 210
Acting Workshop: Devising
Prerequisite: THTR 110 or THTR 150 or THTR 153 or THTR 170 or THTR 171 or THTR 174
Transfers to: UC, CSU
This class is for the student who wants to create their own work, whether they are actors or non-actors. The class will study the history of devising (also known as collective creation), learn techniques of devising, and create, research, develop, rehearse and present a devised project. Some knowledge of traditional theatre is helpful for this class. Some semesters a public performance will be presented.

2 to 4 Units
18 to 36 Lecture hours
54 to 108 Lab hours

THTR 215
Acting: A Course in Auditioning and Cold Reading
Prerequisite: THTR 110
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is designed for the student who wants to be prepared and ready for academic, community or professional auditions. The student will work with the teacher at each class on selection of material, analyzing the text, presentation of material, presentation of self, personal appearance, cold readings, relaxing for an audition; preparation of resumes and pictures, etc, on line sources, etc. By the end of the semester the student will have a variety of audition pieces ready.

3 Units
54 Lecture hours

THTR 230
Principles of Directing
Prerequisite: THTR 110
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student who wants to develop their ability to work with actors, interpret drama and to stage plays. It will cover the history and the techniques of the stage director. Emphasis is placed on class activities such as exercises and scenes. Career opportunities, stage management and assistant directing are also covered. It is a requirement for the Theatre Arts major.

3 Units
36 Lecture hours
54 Lab hours

THTR 231
Principles of Directing II
Prerequisite: THTR 230
Advisory: READ 043 or appropriate placement
Transfers to: UC, CSU
This course is designed for the student majoring in Theatre Arts. The class is a continuation of Theatre Arts 230. Techniques in casting, rehearsing, picturization, characterization, tempo and climax in play direction are covered. Students will direct a 10-minute play with other students.

3 Units
36 Lecture hours
54 Lab hours

THTR 286
Ballet Folklorico
Prerequisite: See request for exception
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 022 or appropriate placement
Transfers to: UC, CSU
This course is designed to give a general knowledge of the regional dance styles of Mexico and its cultural aspects. Instruction will focus on the development of technique in Ballet Folklorico movements. Participation in public performance is required.

2 Units
18 Lecture hours
54 Lab hours
18 Other hours
THTR 290
Cooperative Work Experience/Internship for Theatre Arts Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in business, industrial, non-profit, studio, community and professional theatre organizations under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in their area of vocational interest and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of theatre arts and have completed or enrolled in the appropriate coursework. Instructor approval is required to remain in the class. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours;
3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours;
3 Units/225 hours; 4 Units/300 hours.
1 to 4 Units
3 Lecture hours
60 to 300 Other hours

THTR 299
Directed Study: Theatre
Transfers to: CSU
Independent Study/Directed Study is intended for students who have the ability to assume responsibility for independent work and to prepare written or oral reports and/or appropriate projects. To enroll in an independent study/directed study course, students must possess a 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor. Independent Studies/Directed Studies may be developed from any topic arising from or related to a course of study that will result in developing depth and breadth in that subject area. Students will be expected to meet on a regular basis with their faculty sponsor and submit a final report or project, and student progress shall be evaluated at regular intervals. Academic standards for Independent Studies/Directed Studies shall be the same as those for other courses. Units are awarded in accordance to Title V regulations with one unit of credit awarded for 54 hours of Directed Studies, six (6) hours of which must be with an instructor. The instructor is responsible for monitoring student progress through the semester.
Students may take directed study courses for a maximum of three (3) units within a discipline, and may not accumulate more than a total of nine (9) units college wide.
1 to 3 Units
54 to 162 Lab hours

VOCABULARY

Division of Communications & Languages

VOCB 025
Intermediate Vocabulary
Advisory: READ 021 or appropriate placement
This course is intended for students who want to develop precollege-level reading, writing, and speaking vocabulary. Students will learn the meaning of new words commonly used in college textbooks and lectures, and they will use them in written and spoken sentences. Students will also gain knowledge of word roots to reinforce their understanding of words. This is a non-degree course and is offered on a pass/no pass basis.
3 Units
54 Lecture hours

VOCB 101
Vocabulary & Etymology
Prerequisite: ENGL 035 or ENLA 100 or appropriate placement; READ 022 or appropriate placement
Transfers to: CSU
This course offers the student an opportunity to develop a college level vocabulary. The course emphasizes an understanding of the etymology, definition, and usage of words so that students gain a comprehensive understanding of the meanings of words and how they are used. Additionally, students will study general and specialized terms used in courses across the curriculum. In order to internalize word meanings successfully, students will work in individual, small group, and whole class settings.
3 Units
54 Lecture hours

VOCATIONAL NURSING

Division of Health Sciences & Nursing

VN 061
Basic Fundamentals of Nursing
Prerequisite: HS 060; PSY 101
Corequisite: VN 061L
This course is designed for the entry level vocational nursing student with a focus on the nursing process and its application in medical/surgical settings. The role of the Licensed Vocational Nurse in providing care for patients in a variety of situations is discussed. This course is open to students enrolled in the Vocational Nursing program and is required for Vocational Nursing licensure.
3.5 Units
65 Lecture hours

VN 061L
Basic Fundamentals of Nursing Laboratory
Prerequisite: HS 060; PSY 101
Corequisite: VN 061
Advisory: READ 043 or appropriate placement
This course is designed to provide the entry level vocational nursing student with the opportunity to learn basic nursing skills in the Health Science Skills laboratory and the clinical setting within the context of the nursing process. The student will apply the role of the Licensed Vocational Nurse in the clinical medical surgical setting. This course is open to students enrolled in the Vocational Nursing Program and is required for Vocational Nursing licensure. Offered on a pass/no pass basis.
5 Units
270 Lab hours

VN 071L
Introduction to Medical-Surgical Nursing Lab
Prerequisite: VN 061 and VN 061L
This course will provide the student with the opportunity to use the nursing process at a beginning level to care for patients in the clinical setting. The student will develop competency in data collection and basic nursing skills. Special emphasis will be placed on the care of the patient with problems of the endocrine, musculoskeletal, and integumentary systems, as well as the older adult. This course is open to students enrolled in the Vocational Nursing Program and is required for Vocational Nursing licensure. Offered on a pass/no pass basis.
3.5 Units
189 Lab hours

VN 072L
Intermediate Medical-Surgical Nursing Lab
Prerequisite: VN 071L; VN 074 and VN 075
Corequisite: VN 073
This course will provide the student with the opportunity to use the nursing process with increasing independence in providing care for patients in the clinical setting. The student will increase competency in data collection and nursing skills. Special emphasis will be placed on the care
of the patient with problems of the cardiovascular respiratory, gastrointestinal and renal systems. This course is open to students enrolled in the Vocational Nursing program and is required for Vocational Nurse licensure. Offered on a pass/no pass basis.

3.5 Units
189 Lab hours

VN 073
Basic Pharmacology
Prerequisite: VN 061 and VN 061L
Advisory: HS 045 and READ 043 or appropriate placement
This is an introductory course of basic techniques and computations used in the administration of medications. Completion of the course prepares the student to safely administer medications to patients under the supervision of the nursing instructor. This course is open to students enrolled in the Vocational Nursing Program and is required for the Vocational Nursing Licensure.
2 Units
36 Lecture hours

VN 074
Nursing Care of Patients with Integumentary/Orthopedic Problems and Concepts of Gerontologic Nursing
Prerequisite: VN 061 and VN 061L
Using the medical model, the nursing process, and Erickson’s psychosocial theory of human development, this course is designed to prepare the vocational nursing student with the foundational knowledge necessary to care for the aging patient, and patients with disorders of the musculoskeletal and integumentary systems. This course is open to students enrolled in the Vocational Nursing Program.
2.5 Units
45 Lecture hours

VN 075
Nursing Care of Patients with Endocrine Problems
Prerequisite: VN 061 and VN 061L
This course focuses on the use of the nursing process in caring for individuals with disturbances of the pancreas, thyroid, parathyroid, adrenal and pituitary glands. The pathophysiology, assessment data, nursing problems, medical and nursing interventions for patients with endocrine problems are discussed. This course is open to students enrolled in the Vocational Nursing Program and is required for Vocational Nurse licensure.
1 Unit
18 Lecture hours

VN 076
Nursing Care of Patients with Renal, Urinary and Gastrointestinal Problems
Prerequisite: VN 071L; VN 074 and VN 073
Corequisite: VN 073
This course focuses on the application of the nursing process in medical surgical situations for the patient with gastrointestinal and renal problems. Emphasis is placed on the application of principles of nutrition in caring for patients with gastrointestinal and renal dysfunction. This course is open to students enrolled in the Vocational Nursing Program and is required for Vocational Nurse licensure.
3.5 Units
63 Lecture hours

VN 077
Nursing Care of Patients with Cardiovascular and Respiratory Problems
Prerequisite: VN 071L; VN 074 and VN 073
Corequisite: VN 073
Using the medical model, the nursing process, and Erickson’s psychosocial theory of human development, this course is designed to prepare the vocational nursing student with the foundational knowledge necessary to care for patients with cardiovascular and respiratory disorders. This course is open to students enrolled in the Vocational Nursing Program.
3 Units
54 Lecture hours

VN 081L
Maternal and Pediatric Nursing Lab
Prerequisite: VN 072L; VN 073, VN 074, VN 075, VN 076 and VN 077
Corequisite: VN 084
This course will provide the student with the opportunity to apply learned leadership skills within the Vocational Nurse scope of practice. The student will utilize the nursing process with increasing independence and accountability in providing care for patients in the clinical setting. Special emphasis will be placed on the care of medical/surgical patients with complex problems, neurological system disorders and oncological problems. The student will have the opportunity to further develop the necessary communication skills needed to provide care for patients with mental health problems. This course is open to students enrolled in the Vocational Nursing Program and is required for Vocational Nurse licensure.
4 Units
72 Lecture hours

VN 085
Leadership & Supervision for the Vocational Nurse
Prerequisite: VN 072L; VN 073, VN 074, VN 075, VN 076 and VN 077
This course will introduce principles of leadership, group dynamics, delegation, and effective communication in working relationships for the vocational nurse. Emphasis is placed on delegation and supervision of nursing assistants, other vocational nurses, and unlicensed assistive per-
WELDING
Division of Career & Technical Education

WELD 040
Introduction to Welding Processes
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This is an introductory class designed to familiarize the student with several welding processes that are currently used in the welding and metal fabrication industry. This course offers an overview and basic introduction to the theory and practice of a variety of welding and metal cutting methods.

Prerequisite: VN 081L and VN 084
This course presents mental health concepts that relate to emotional and social issues influencing a patient’s well-being and problems related to the neurological system. Emphasis will be placed on the nursing process, as it relates to problems of neurological function and mental health. This course is open to those students enrolled in the Vocational Nursing Program and is required for Vocational Nursing licensure.

3 Units
54 Lecture hours

VN 086
Mental Health and Neurological Nursing Problems
Prerequisite: VN 072L and VN 081L; VN 073, VN 074, VN 075, VN 076, VN 077 and VN 084
This course focuses on the application of the nursing process in medical-surgical situations for the patient with cancer diagnoses of various body systems and immune deficiency disorders. Emphasis is placed on the physical, psychological, and psychosocial effects of diagnosis, medical therapy, and nursing intervention with the application of principles of nutrition, pharmacokinetics, and palliative care in caring for patients with cancer. The course is open to students enrolled in the Vocational Nursing Program and is required for the Vocational Nurse licensure.

1 Unit
18 Lecture hours

WELD 045
Basic Electric Arc Welding
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is intended for the student who wants to progress to a basic level of welding processes and further their skills in manual and semi-automatic electric arc welding methods and techniques. This course emphasizes skills in Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW). The course also focuses on safety, theory, characteristics and settings for power supplies and welding units, electric current settings, electrode identification and selection, welding positions, and welding of ferrous and non-ferrous metals. Special emphasis will be placed on developing proficiency and speed for high-volume production applications.

2 Units
18 Lecture hours
54 Lab hours

WELD 050
Semi-Automatic Welding Processes
Prerequisite: WELD 040
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is intended for the student who wants to progress to an intermediate level of welding processes and further their skills in wire-fed, semi-automatic welding methods and techniques. This course emphasizes skills in Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW). The course also focuses on safety, theory, characteristics and settings for power supplies and wire feeding units, electric current settings, electrode identification and selection, welding positions, and welding of ferrous and non-ferrous metals. Special emphasis will be placed on developing proficiency and speed for high-volume production applications.

4 Units
36 Lecture hours
108 Lab hours

WELD 055
Manual Electric Arc Welding Processes
Prerequisite: WELD 040
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course will emphasize safety, theory, procedure, and practical skill development.

2 Units
18 Lecture hours
54 Lab hours

WELD 060
Production Welding Techniques
Advisory: READ 043 or appropriate placement; WELD 045
This is an intermediate level course focused on welding techniques used in high-volume production manufacturing environments. Students gain proficiency using pulsed-arc and non-pulsed-arc GMAW and GTAW processes on carbon steel, stainless steel, and aluminum materials. Correct use of welding fixtures, positioners, and other auxiliary equipment are covered. Emphasis is placed on using shop safety in addition to developing proper working procedures.

4 Units
36 Lecture hours
108 Lab hours

WELD 065
Introduction to Gas Tungsten Arc Welding
Prerequisite: WELD 040
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course introduces the principles and practices of gas tungsten arc welding (GTAW), including set-up/use of GTAW equipment and safe use of tools and equipment. Instruction and practice is provided for gaining proficiency welding carbon steel, stainless steel, and aluminum weld joints in the flat and horizontal positions. Fundamentals of the GTAW process, correct consumables, equipment, and pre-weld preparation will be covered.

4 Units
36 Lecture hours
108 Lab hours

WELD 070
Advanced Gas Tungsten Arc Welding
Prerequisite: WELD 065
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or...
appropriate placement
This course provides further advancement of knowledge and skills in gas tungsten arc welding (GTAW). Emphasis is placed on developing proficiency in welding carbon steel, stainless steel, and aluminum weld joints in the vertical and overhead position. This course exposes students to using positioners, welding fixtures, and tooling commonly used in the workplace. Preparation for welding certification is covered.
4 Units
36 Lecture hours
108 Lab hours

WELD 075
Certification Welding I
Prerequisite: WELD 055
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is an advanced course offering specialized instruction necessary for passing the City of Los Angeles Department of Building & Safety (LADBS) certified welder performance examinations. Emphasis will be placed on building skills in Shielded Metal Arc Welding (SMAW), Flux Cored Arc Welding (FCAW), and Gas Metal Arc Welding (GMAW) as applicable to acquire LADBS certified welder classifications in structural steel, light gauge steel, and structural aluminum. Safety, welding codes, welding procedures and techniques, inspection requirements, nondestructive testing, and destructive testing will be covered. This course may be repeated once for certification or licensure standards, only by permit from the division.
4 Units
36 Lecture hours
108 Lab hours

WELD 082
Pipe Layout and Fabrication
Prerequisite: WELD 075
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course examines the fundamental concepts used in the fabrication of carbon steel pipe connections and fittings. Emphasis will be placed on constructing lateral, sleeve, and branch pipe connections commonly used in the piping industry. Use of manual and mechanized thermal cutting equipment is covered. Related math calculations and cutting techniques will be utilized to prepare students for entry into a pipe fitting related field.
4 Units
36 Lecture hours
108 Lab hours

WELD 083
Pipe Welding II
Prerequisite: WELD 081
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is second in a series of courses for welding of carbon steel pipe using the shielded metal arc welding (SMAW) and gas tungsten arc welding (GTAW) processes. The course will cover safety procedures, electrode selection, weld joint preparation, and weld quality. Emphasis will be placed on achieving proficiency in welding pipe in the 1G, 2G, and 6G positions in accordance with American Petroleum Institute API-1104: Standard for Welding Pipeline and Related Facilities.
4 Units
36 Lecture hours
108 Lab hours

WELD 084
Pipe Welding - Level I
Prerequisite: WELD 075
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is the first in a series of courses for welding of pipe using the shielded metal arc welding (SMAW) process. The course will cover safety procedures, electrode selection, weld joint preparation, and weld quality. Emphasis will be placed on student proficiency in welding pipe in the 1G, 2G and 5G positions in accordance with American Petroleum Institute API-1104: Standard for Welding Pipe and Related Facilities.
4 Units
36 Lecture hours
108 Lab hours

WELD 085
Introduction to Metal Fabrication
Prerequisite: WELD 040; WELD 050; WELD 055; WELD 065
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This is an introductory course that examines the theory and application aspects of metal fabrication. It covers the safe and effective use of metal fabricating equipment and tools to complete assigned projects. This course also includes hands-on instruction and practice in cutting, grinding, drilling, rolling, bending and welding tasks in accordance with supplied shop drawings.
3 Units
27 Lecture hours
81 Lab hours

WELD 299
Directed Study in Welding Technology
Prerequisite: 2.5 overall grade point average, a 3.0 grade point average in the discipline of study being requested, or receive an exception from the instructor
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course provides an opportunity for the student to expand their studies in Welding Technology beyond the classroom by completing a project or an assignment arranged by an agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of the assignment and...
the unit value assigned for successful completion. Students must possess a 2.5 overall GPA, a 3.0 GPA in the discipline of study being requested, or receive an exception from the instructor. Students may take a maximum of 3 units of Directed Study within a discipline and 9 units college-wide.

WFT 040
Firefighter Type 2 (S130)
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course provides students seeking wildland training and certification at the Type 2 level. This course provides instruction in wildland fire behavior, hazard recognition, human factors in high-risk environments, basic incident command system, radio operations, and documentation. Classroom and field exercises will prepare the student for a position as a Firefighter Type 2 (FF2). This course meets the National Wildfire Coordinating Group’s (NWCG) requirements for S-130.
1.1 Units
16 Lecture hours
12 Lab hours

WFT 043
Wildland Fire Chain Saws (S212)
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course provides the basic knowledge, understanding, function, maintenance, and use of internal combustion engine powered chain saws. The student will also learn the tactical use of wildland fire chainsaws. Field exercises support entry level training for fighters with little or no previous experience in operating a chain saw. The field exercises will provide students with hands-on cutting experience in surroundings similar to fire line situations. This is an entry level course for students interested in wildland fire suppression and is highly recommended prior to enrolling in the intermediate level wildland fire related course. This course meets the National Wildfire Coordinating Group (NWCG) requirements.
1.1 Units
16 Lecture hours
12 Lab hours

WFT 044
Introduction to ICS (I100)
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course provides first responders and other interested students an introduction to the Incident Command System (ICS-100). This course also provides a basic introduction to wildland fire management (5-110) and a basic working knowledge of the human performance concepts in dynamic and high-risk environments (L-180). This course meets the National Incident Management System (NIMS) and National Wildfire Coordinating Group (NWCG) National Standard Curriculum.
1 Unit
18 Lecture hours

WFT 045
ICS for Single Resources (I200)
Prerequisite: WFT 044 or ICS 100 certification from FEMA, NWCG or CSFM (CA State Fire Marshal)
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course is designed to teach first responders and other interested students to operate efficiently during an incident or event within the Incident Command System (ICS). The course focuses on the implementation of ICS and single resources. Topics include ICS fundamentals review, leadership and management, delegation of authority, management by objectives, ICS functional areas and positions, briefings, organizational flexibility, and transfer of command. This course provides training and resources for personnel who are likely to assume a supervisory position within the ICS. This course meets the National Incident Management System (NIMS) National Standard Curriculum.
0.7 Units
13 Lecture hours

WFT 046
Intermediate ICS (I300)
Prerequisite: WFT 045
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course provides description and detail of the Incident Command System (ICS) organization and operations in supervisory roles on expanding or Type 3 incidents. Topics include ICS fundamentals review, incident/event assessment and agency guidance in establishing incident objectives, Unified Command, incident resource management, planning process, mobilization, transfer of command, and close out. Students will be organized into teams for classroom exercises that replicate an incident operation. This course meets the National Incident Management Systems (NIMS) National Standard Curriculum.
1 Unit
24 Lecture hours

WFT 047
Advanced ICS (I400)
Prerequisite: WFT 046
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
This course provides skills and resources required for advanced application of the Incident Command System (ICS) organization and operations. This course expands on ICS-100, ICS-200, and ICS-300 courses and is intended for command and general staff positions. Topics include ICS fundamentals review, major and/or complex incident/event management,
WFT 077 Wildland Fire Academy
Prerequisite: READ 043 or appropriate placement; FTEC 044; The ability to carry a 45 lb. pack three miles within a 45 minute time period. Must complete and pass a US Forest Service Medical Exam
Advisory: ENGL 035 or ENLA 100 or appropriate placement
This course is designed for those students who desire to gain certification through the NWCG (National Wildland Coordinating Group) as a Wildland Firefighter. This course provides training in hand crew formation, fire line construction and the use of wildland equipment. Certification in S-130, S-131 and Hazardous Materials Response is included. Students will learn about wildland firefighter safety, fire behavior, protective clothing, fire pumps and wildland fire tools. This course includes arduous physical conditioning as day and night time hikes and other outdoor activity is included. This academy meets or exceeds the minimum required training for the US Forest Service and CAL Fire Agencies as a wildland firefighter for certification purposes.
16 Units
190 Lecture hours
297 Lab hours

WFT 101 Wildland Fire Behavior
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement; MATH 033 or MATH 033B or appropriate placement
Transfers to: CSU
This course is one in a series of core courses required for the Wildland Fire Technology Certificate of Achievement and Associate of Science Degree program. This course provides students with information necessary to understand occupational safety and hazards associated with wildland firefighting operations. Emphasis will be placed on situational awareness, protective measures, accident avoidance procedures, and the risk management process. Students will also review fire ground near misses, entrapments, and fatalities. This course meets or exceeds the National Wildfire Coordinating Group (NWCG) requirements.
3 Units
54 Lecture hours

WFT 102 Wildland Fire Fighter Safety and Survival
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is one in a series of core courses required for the Wildland Fire Technology Certificate of Achievement and Associate of Science Degree program. This course provides students with information necessary to understand occupational safety and hazards associated with wildland firefighting operations. Emphasis will be placed on situational awareness, protective measures, accident avoidance procedures, and the risk management process. Students will also review fire ground near misses, entrapments, and fatalities. This course meets or exceeds the National Wildfire Coordinating Group (NWCG) requirements.
3 Units
54 Lecture hours

WFT 103 Wildland Fire Operations
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is one in a series of core courses required by the Wildland Fire Technology Certificate of Achievement and Associate of Science Degree program. This course provides students with information necessary to understand ground and air operations associated with wildland firefighting operations. Emphasis will be placed on incident command system use, strategy, tactics, hazards, resource typing, management, and safety procedures during wildland fire incidents. This course meets or exceeds the National Wildfire Coordinating Group (NWCG) requirements.
3 Units
54 Lecture hours

WFT 104 Wildland Fire Investigation, Prevention and Public Information
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is one in a series of core courses required by the Wildland Fire Technology Certificate of Achievement and Associate of Science Degree program. This course provides students with information and skills necessary to understand the roles and functions of the Public Information Officer (PIO, S-203), Fire Prevention Education Team Member (PETM, P-101), and the Wildland Fire Investigator (INVF, FI-110). Various wildland fire associated class projects will challenge the student’s public speaking, report writing, and presentation skills. This course meets or exceeds the National Wildfire Coordinating Group (NWCG) requirements.
3 Units
54 Lecture hours

WFT 105 Wildland Fire Logistics, Finance and Planning
Advisory: ENGL 030 or ENLA 034 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course is one in a series of core courses required by the Wildland Fire Technology Certificate of Achievement and Associate of Science Degree program. This course provides students with information necessary to understand the responsibilities and functions of the logistics, finance, and planning sections. Emphasis will be placed on how the different incident command system sections are organized and utilized during wildland fire incidents. This course meets or exceeds the National Wildfire Coordinating Group (NWCG) requirements.
3 Units
54 Lecture hours

WFT 290 Cooperative Work Experience/Internship for Wildland Fire Technology
Related Fields
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
Transfers to: CSU
This course supports and reinforces on-the-job training in the Wildland Fire Technology field under supervision of a college instructor and is facilitated by the use of learning objectives. The student will be working in a skilled or professional level assignment in the area of Wildland Fire Technology and will meet performance objectives related to instruction that are above and beyond the conditions of regular employment. This course is intended for students whose job is related to the field of fire technology and have completed or enrolled in the appropriate coursework. “Contact the CWE office regarding re-enrollment procedures.”
Student Unpaid Internship:
1 Unit/60 hours; 2 Units/120 hours; 3 Units/180 hours; 4 Units/240 hours
Student Paid Internship:
1 Unit/75 hours; 2 Units/150 hours; 3 Units/225 hours; 4 Units/300 hours
1 to 4 Units
3 Lecture hours
60 to 300 Other hours
Noncredit Courses

NAJ 001
Public Safety Careers Exploration
This course provides an orientation to the dynamic field of public safety services and career paths. Topics include survey of the history and development of public safety agencies, ethical and moral standards of service members, types of employment opportunities, education and training requirements. Students receive guidance in individual assessment of suitable careers and develop personal education plans.
0 Units
8 Lecture hours

NAJ 002
Public Safety Officer Employment Readiness: Oral Interview and Personal History
This course equips students with knowledge and practical guidance in the pre-employment background investigation process for careers in public safety. Students learn how to thoroughly complete the Personal History Statement. Mock interviews and evaluations reinforce oral communication skills, and guidance in professional conduct prepares students to confidently navigate the job application process.
0 Units
8 Lecture hours

NAJ 003
Public Safety Officer Lifetime Wellness and Stress Management I
This course offers principles of physical fitness and mental health for students preparing for careers in public safety. Physical wellness topics include principles of physical conditioning, foundations of balanced nutrition, common medical concerns, and elements of the Physical Agility Test (PAT). Mental health topics include stress physiology, importance of social support, effects of substance use, and stress management techniques. Students gain awareness of the integrated nature of mind-body health and develop personal fitness programs.
0 Units
8 Lecture hours

NAJ 004
Introduction to Laws of Arrest/Search and Seizure
This course is an introduction to key federal and state constitutional laws that inform the authority, liability, and responsibilities of public safety agencies in conducting arrests, searches, and seizures. Students gain an overview of the laws of arrest, types of searches and seizures, and their respective execution procedures.
0 Units
4 Lecture hours

NAJ 005
Fundamentals of Report Writing
This course introduces the critical functions of investigative reports and the responsibility of Public Safety professionals in preparing complete and accurate reports. Students learn the components of an effective investigative report, review essential grammar and writing mechanics, and practice composing a concise report.
0 Units
8 Lecture hours

NAJ 006
Public Safety Officer Lifetime Wellness and Stress Management II
This course reinforces personal disciplines in maintaining physical and mental wellness for Pre-Academy students and prospective police cadets. A practicum companion to NPAC 003 Lifetime Wellness and Stress Management I, this course emphasizes physical performance training to meet specific requirements of the California Commission on Peace Officer Standards and Training.
0 Units
6 Lecture hours

NAJ 007
PELLETB: Exam Preparation
This is an academic test preparation course for Pre-Academy students seeking admissions to the Police Academy. Students gain an overview of the components of the POST Entry Level Law Enforcement Test Battery (PELLETB) and are guided in practice exercises with sample questions.
0 Units
4 Lecture hours

NAJ 008
Fundamentals of Law Enforcement/Individual Study
(Formerly NVOC 008)
This course is designed to provide law enforcement students or those involved in a related public service subject to expand on their knowledge in the major points of law enforcement. Topics include history and general development of law enforce-ment, ethical and moral standards, California law, and other related issues. Students will receive individualized instruction tailored to their plan of study.
0 Units
1 to 500 Lab hours

NART 005
Theatre Production Workshop
(Formerly NVOC 005)
This course will introduce students to all aspects of preparing for and presenting a full theater production. Topics covered will include technical set-up of the stage, the dress rehearsal, pre-show preparation, techniques for striking the set and the special needs of a traveling show.
0 Units
18 Lecture hours
18 Lab hours

NART 285
Graphic Design Skills Development
(Formerly NVOC 285)
This course complements the GDSN lab and lecture courses and is designed to provide an additional opportunity for students to practice concepts covered in the lab and lecture courses and enhance their Graphic Design work in preparation of their portfolios. These instructional activities are not available in the regular lecture/lab courses and are not required for the grade in the courses. It is recommended for students who have previously or are currently enrolled in any Rio Hondo College Graphic Design course with a prefix of ART or GDSN.
0 Units
1 to 400 Lab hours

NART 291
Career Exploration: Graphic Design I: History
(Formerly NVOC 291)
Advisory: READ 022 or appropriate assessment
This course is intended for students interested in the exploration of a career in Graphic Design. This course is the first in a series of 4 courses and is an abbreviated survey of the origins of the Graphic Design profession from the time of Gutenberg through the Industrial Revolution into the modern Digital Era.
0 Units
12 Lecture hours
NART 292  
Career Exploration: Graphic Design II:  
Process  
(Formerly NVOC 292)  
Advisory: READ 022 or appropriate assessment  
This course is intended for students interested in the exploration of a career in Graphic Design. This course is the second in a series of 4 courses and is an overview of the practices and tasks involved in the process of developing a graphic design solution. 0 Units 12 Lecture hours  

NART 293  
Career Exploration: Graphic Design III:  
Academic Pathways  
(Formerly NVOC 293)  
Advisory: READ 022 or appropriate assessment  
This course is intended for students interested in the exploration of a career in Graphic Design. This course is the third in a series of 4 courses and is an overview of the academic pathways available to students interested in the Graphic Design profession. 0 Units 12 Lecture hours  

NART 294  
Career Exploration: Graphic Design IV:  
Career Paths  
(Formerly NVOC 294)  
Advisory: READ 022 or appropriate assessment  
This course is intended for students interested in the exploration of a career in Graphic Design. This course is the fourth in a series of 4 courses and is an overview of the general career pathways available to students interested in the Graphic Design profession. 0 Units 12 Lecture hours  

NBAS 004  
General Academic Advisement  
Courses designed to assist awareness of college programs and services and exercising good judgment in the selection of classes and an academic path. Topics can include basic skills assessment, campus life, academic and career choices, and other related subjects. 0 Units 18 Lecture hours  

NBAS 005  
Personal and Career Exploration  
Courses to increase awareness of processes for personal and career growth. Intellectual, social, emotional, and physical development; personal values clarification; decision making; identification of needs and methods of satisfying; human sexuality and family life; and accepting and assuming responsibility for own behavior; and investigation into career and life planning alternatives can be explored. Included can be diagnostic testing, survey of interests, and capabilities, and development of positive self-image through group interaction. 0 Units 18 Lecture hours  

NBAS 008  
Personal Learning Skills/Basic Skills  
This course assists the student to become more effective and efficient in developing skills and knowledge necessary to function in a work setting. Skills may include psychomotor skills, communication skills and computer software skills. Opportunities to develop critical thinking skills in simulated situations are provided. The student may use computer assisted instructional programs, word processing, equipment related to the work setting, audiovisual materials and computer software to meet program objectives. Faculty and peers will provide tutoring services and assist students in completing assignments. 0 Units 120 Lecture hours  

NBAS 009  
Supervised Tutoring in College Courses  
This course provides students with the tools needed to excel in their courses. Trained tutors individually help students attain higher levels of comprehension and competency by providing supplemental instruction for pre-approved subjects. Workshops enhance student learning. This course is open-entry/open-exit. 0 Units 1 to 180 Lab hours  

NBAS 010  
Supervised Tutoring in Mathematics  
Trained tutors will individually help students who need assistance in attaining comprehension and competency in mathematical learning skills. This course is designed to supplement the instruction in mathematics courses and other courses with mathematical content. This course is open-entry/open-exit. 0 Units 1 to 180 Lab hours  

NBAS 014  
Review of Integrated Math I Part A  
This course is a review of the first half of Integrated Math I. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the first semester of Integrated Math I, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions. 0 Units 22 to 100 Lecture hours  

NBAS 015  
Review of Integrated Math I Part B  
This course is a review of the second half of Integrated Math I. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the second semester of Integrated Math I, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions. 0 Units 22 to 100 Lecture hours  

NBAS 016  
Review of Integrated Math II Part A  
This course is a review of the first half of Integrated Math II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the first semester of Integrated Math II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Algebra, portions of Functions, and portions of Number and Quantity. 0 Units 22 to 100 Lecture hours  

NBAS 017  
Review of Integrated Math II Part B  
This course is a review of the second half of Integrated Math II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the second semester of Integrated Math II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from
a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, portions of Number and Quantity, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 021**
**Review of Algebra I Part B**
This course is a review of the second half of Algebra I. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the second semester of Algebra I, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 022**
**Review of Geometry Part A**
This course is a review of the first half of Geometry. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the first semester of Geometry, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 023**
**Review of Geometry Part B**
This course is a review of the second half of Geometry. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the second semester of Geometry, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 024**
**Review of Algebra II Part A**
This course is a review of the first half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the first semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 025**
**Review of Algebra II Part B**
This course is a review of the second half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the second semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 026**
**Review of Geometry Part B**
This course is a review of the second half of Geometry. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the second semester of Geometry, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 027**
**Review of Geometry Part C**
This course is a review of the third half of Geometry. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the third semester of Geometry, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 028**
**Review of Geometry Part D**
This course is a review of the fourth half of Geometry. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the fourth semester of Geometry, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Geometry, Statistics and Probability, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 029**
**Review of Algebra II Part C**
This course is a review of the third half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the third semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 030**
**Review of Algebra II Part D**
This course is a review of the fourth half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the fourth semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 031**
**Review of Algebra II Part E**
This course is a review of the fifth half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the fifth semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 032**
**Review of Algebra II Part F**
This course is a review of the sixth half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the sixth semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 033**
**Review of Algebra II Part G**
This course is a review of the seventh half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the seventh semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 034**
**Review of Algebra II Part H**
This course is a review of the eighth half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the eighth semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 035**
**Review of Algebra II Part I**
This course is a review of the ninth half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the ninth semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 036**
**Review of Algebra II Part J**
This course is a review of the tenth half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the tenth semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 037**
**Review of Algebra II Part K**
This course is a review of the eleventh half of Algebra II. It is mainly a self-paced, software-based independent study program which permits a high school student to retake the eleventh semester of Algebra II, for the purpose of making up credit and/or improving their grade from a prior attempt at the course, but may involve individualized and/or small group instruction as needed. Students wishing to enroll in this course will need consent from a high school counselor and consent from a parent. The course covers the Common Core State Standards domains of Number and Quantity, Algebra, and portions of Functions.

0 Units
22 to 100 Lecture hours

**NBAS 038**
**Real Estate Practices**
(Formerly NVOC 038)
This class is an introduction to the professional aspects of the real estate industry. The focus of the course is on the agency responsibilities of the salesperson including office management, listing and prospecting property, selling and marketing techniques, advertising, securing loans, and closing procedures. Students will also acquire general knowledge of other pertinent fields as they relate to real estate, such as finance, appraisal, escrow, and investing. This course is approved by the California Bureau of Real Estate (CalBRE) to fulfill education requirements for the California Real Estate Salesperson License.
and may be applied towards the California Real Estate Broker License requirements. Taken in sequence with NBIZ 039, students earn the Certificate of Completion in Real Estate Practice and Finance approved by the California Community Colleges Chancellor’s Office.

0 Units
48 Lecture hours

NBIZ 039
Real Estate Finance
(Formerly NVOC 039)
This course is designed to help the new real estate agent, the investor, and the lender gain a better understanding of the complex world of real estate finance. It covers all aspects of real estate financing from completing loan applications, navigating the escrow process, to closing loans. The course details current lending policies, qualifying standards, and disclosure requirements. This course is approved by the California Bureau of Real Estate (CalBRE) to meet the elective education requirements for the California Real Estate Salesperson License and the California Real Estate Broker License. Taken in sequence with NBIZ 040, students earn the Certificate of Completion in Real Estate Principles and Appraisal approved by the California Community Colleges Chancellor’s Office.

0 Units
48 Lecture hours

NBIZ 040
Real Estate Principles
(Formerly NVOC 040)
This is a foundational real estate course that covers the basics of principle and principles of land and property transactions. Course topics include overview of property laws, land descriptions, titles, acquisition and transfer, liens and encumbrances, taxation, contract law, landlord and tenant laws, and real estate mathematics and finance. Students will become familiar with terminology and forms commonly used in everyday real estate transactions. This course is approved by the California Bureau of Real Estate (CalBRE) to fulfill education requirements for the California Real Estate Salesperson License. Taken in sequence with NBIZ 041, students earn the Certificate of Completion in Real Estate Principles and Appraisal approved by the California Community Colleges Chancellor’s Office.

0 Units
48 Lecture hours

NBIZ 041
Real Estate Appraisal
(Formerly NVOC 041)
This course provides a comprehensive overview of real estate appraisal principles and procedures. Topics include land values and their characteristics, the process of appraising, capitalization theory, site analysis, and construction methods. Students gain guided practice in accrued depreciation analysis, income and expense analysis, and techniques in the income approach method of appraising. This course is approved by the California Bureau of Real Estate (CalBRE) to meet the elective education requirements for the California Real Estate Salesperson License and the California Real Estate Broker License. Taken in sequence with NBIZ 040, students earn the Certificate of Completion in Real Estate Principles and Appraisal approved by the California Community Colleges Chancellor’s Office.

0 Units
48 Lecture hours

NCHS 001
Health and Fitness
This is an open-entry, open-exit course to develop and enhance a student’s knowledge of the importance of healthy lifestyles and to further develop skills which will facilitate a personal fitness program. Students will also participate in specific activities that develop an individual’s level of physical fitness.

0 Units
1 to 54 Lab hours

NCHS 002
Beginning Jujitsu: Self Defense for Adults
This course is designed to teach the basic skills of self-defense. Students will be taught skills related to coordination, quick reflex response, how to build stamina, speed, and strength. They will learn all phases of punches, blocks, kicks, hand releases and breaks, two-step fighting, judo and jujitsu falls. Students will practice strategies of protecting themselves from attackers.

0 Units
1 to 48 Lecture hours

NCIT 002
U.S. Citizenship Preparation
This course is designed to assist eligible individuals in completing the steps required to become United States citizens. Students gain knowledge of United States history, government and institutions, community services and agencies, and the privileges and obligations of citizenship. The course prepares students with literacy skills necessary to pass the written test and provides listening and speaking practices for the oral interview. Students will receive guidance on completing appropriate application forms.

0 Units
45 Lecture hours

NCOA 001
Painting for Older Adults
This course offers the older adult an individual approach to painting and creative arts. Topics can include art appreciation and art history; awareness of line, color, shape and form; techniques in drawing and progression through color mixing and canvas painting. Creativity and general art knowledge will be taught in a friendly and relaxed environment allowing each artist to work at their own pace.

0 Units
1 to 48 Lecture hours

NCOA 002
Music Workshop for the Third Age
Courses for instrumental and vocal musical experiences. Included can be rehearsals and performances in cooperation with the Rio Hondo Chapter of Sweet Adelines; other local choral and/or singing groups; and instruction in learning to play a musical instrument.

0 Units
1 Lecture hours
1 Lab hours

NCOA 007
Chorus Singing for the Older Adult
This course introduces older adult students to a variety of choral music and explores its cultural and historical aspects. Students will gain knowledge of posture, vowel modification, elements of phrasing and harmony. Students will perform vocal exercises and practice breathing techniques appropriate for the older adult.

0 - Units
1 to 48 Lecture hours

NCOA 008
Computers Unlimited for Older Adults
This course is designed for the older adult who thinks he or she will never learn to use a computer. Students will build basic skills that will prepare them to write documents, send e-mail, use online banking or simply enjoy surfing the Internet. Mastery of the basic skills will let you grow from simple accomplishments to things you never dreamed possible. Our gentle, easy approach will show you the many ways that computers can be fun and interesting.

0 Units
8 to 20 Lecture hours
8 to 20 Lab hours
NCOA 010  
Principles of Mind and Body Health for Older Adults: Flexibility and Balance  
This course provides older adults with instruction and resources for cultivating mind and body health. Guided instruction in active and passive yoga poses, stretching movement, and breathing exercises adapted for older adults is incorporated with introduction to the philosophy of Hatha Yoga. The course includes presentations and class discussions on current topics on nutrition, healthy aging, and safety factors.  
0 Units  
1 to 24 Lecture hours

NCOA 012  
Principles of Mind and Body Health for Older Adults II: Strength and Balance  
This course provides older adults with instruction and resources for cultivating mind and body health. Guided instruction in movements to maintain and increase muscle strength, physical fitness, coordination, and balance is combined with class discussions on current topics in nutrition, healthy aging, and mental health.  
0 Units  
1 to 24 Lecture hours

NCOA 013  
Current Topics for Older Adults  
This course presents older adults with various topics for discussion and class activities based on the student's individual interests and backgrounds. Older adults will explore international, national and local events and issues from a current and historical viewpoint.  
0 Units  
1 to 24 Lecture hours

NCOA 014  
Tai Chi Chuan for Older Adults  
This course introduces older adults to a Chinese health exercise which is neither vigorous nor strenuous. It is suitable for older adults who want to exercise to gain or maintain good health. It will strengthen the muscles and organs, relax the mind and body, improve blood circulation, and increase memory and concentration.  
0 Units  
1 to 24 Lecture hours

NCOA 015  
Creative Writing for Older Adults  
This course is for older adults and teaches both beginning and experienced writers how to create and shape autobiographies, fiction, non-fiction and poetry into readable and publishable forms. Participants will put their experiences on paper and analyze quality, selection and structure of written materials through group discussion and projects.  
0 Units  
1 to 24 Lecture hours

NESL 001  
ESL Beginning I  
This course is suitable for the true beginner to the English language. This entry level course focuses on the acquisition of basic speaking, listening, reading, and writing skills to meet immediate social communication needs in an English-speaking environment. Successful completion of this course prepares students to enter NESL 015.  
0 Units  
30 to 60 Lecture hours

NESL 015  
ESL Beginning II  
Prerequisite: NESL 001 or equivalent placement (CASAS Appraisal)  
This course is designed to provide an introduction to English speaking, listening, reading, and writing skills enabling the student to satisfy routine demands in social settings. Students develop the ability to comprehend and respond to basic spoken English. Students practice reading and writing at the sentence level. If taken in sequence with NESL 001, successful completion of this course earns a Certificate of Competency in Foundations of English as a Second Language and prepares students for entry into NESL 016.  
0 Units  
30 to 60 Lecture hours

NESL 016  
ESL Intermediate I  
Prerequisite: NESL 015 or equivalent placement (CASAS Appraisal)  
This course focuses on expanding students' listening and speaking skills in face-to-face conversations in social, academic, and work contexts. Students gain ability to read and interpret narrative passages on a variety of topics, and to write simple routine correspondence and short paragraphs. Upon successful completion of this course students are prepared to enter NESL 017.  
0 Units  
30 to 60 Lecture hours

NESL 017  
ESL Intermediate II  
Prerequisite: NESL 016 or equivalent placement (CASAS Appraisal)  
This course focuses on preparing English learners to communicate independently and effectively for a variety of purposes and audiences. Students practice engaging in extended conversations, reading for comprehension of authentic texts, and writing multiple paragraphs with good command of grammar conventions. If taken in sequence with NESL 016, successful completion of this course earns a Certificate of Competency in Intermediate English as a Second Language and prepares students for entry into NESL 018.  
0 Units  
30 to 60 Lecture hours

NESL 018  
ESL Advanced I  
Prerequisite: NESL 017 or equivalent placement (CASAS Appraisal)  
This course stresses the refinement and expansion of language skills which enable students to use fluid-paced English to effectively meet social, academic, and workplace demands. Reading for comprehension focuses on factual extraction as well as interpretation using critical thinking skills. Progression of writing skills focuses on the introduction of the writing process and the construction of well-developed compositions. If taken in sequence with NESL 017, successful completion of this course earns a Certificate of Competency in Advanced English as a Second Language and prepares students for direct entry to Rio Hondo College's Credit English Program.  
0 Units  
30 to 60 Lecture hours

NESL 019  
ESL Advanced II  
Prerequisite: NESL 018 or equivalent placement  
The College Preparation course is the highest Noncredit ESL level designed for students who wish to prepare for transition into various academic programs at the college level. This course reinforces and builds on students' English language skills to meet the academic expectations of college courses. Students are introduced to basic elements of an academic course: understanding the syllabus, note-taking, participating in discussion, interpreting written texts, composing essays, and making presentations. Students practice these academic skills in a supportive language-learning community. If taken in sequence with NESL 017, the successful completion of this course earns the Certificate of Competency in English for College Preparation and prepares students for direct entry to Rio Hondo College's Credit English Program.  
0 Units  
30 to 60 Lecture hours

NESL 034  
ESL Multi-Level I  
This course focuses on preparing students to use English to achieve tasks within a variety of real-life situations
such as a doctor’s office or a department store. Students are instructed to be able to listen, speak, read, and write in English in context-specific environments. This is an accelerated version of NESL 035 that is designed for students with some knowledge of the English language.

0 Units
24 to 50 Lecture hours

NESL 035
ESL Multi-Level
This course focuses on preparing students to use English to achieve tasks within a variety of real-life situations such as a doctor’s office or a department store. Students are instructed to be able to listen, speak, read, and write in English in context-specific environments.

0 Units
24 to 90 Lecture hours

NESL 036
Family Literacy
This course focuses on engendering reading and literacy as a fundamental component of a healthy, well-functioning family. The family-oriented assignments promote the seamless integration of reading across school and home boundaries.

0 Units
1 to 72 Lecture hours

NFIR 015
Practical Experience in Fire Suppression (Formerly NVOC 015)
This course is designed to provide fire technology students or those involved in a related fire science subject to expand on their knowledge in the major points of fire service. Topics include the traditions of the fire service, general development of a firefighter, ethical and moral standards, and other related issues pertaining to the fire service. Students will receive individualized instruction tailored to their personal plan of study.

0 Units
1 to 500 Lab hours

NGRD 101
Green Building Basics & LEED
The course offers an introduction to USGBC, green building principles and the fundamentals of the LEED Rating System. It includes topics on climate change and building impacts; motivators for green building; and integrative versus conventional approaches – and the associated benefits – to building design, construction and operations. This course is intended for those who are new to green building and looking to learn the basics of green building and LEED.

0 Units
20 Lecture hours

NHSN 031
First Aid and CPR (Formerly NVOC 031)
This course teaches skills with the AHA’s research-proven practice-while-watching technique. The course is designed to teach students critical skills needed to respond to and manage an emergency until emergency medical services arrives. Skills covered in this course include first aid; choking relief in adults, children, and infants; and what to do for sudden cardiac arrest in adults, children, and infants. This course is for anyone with limited or no medical training who needs a course completion card in CPR and AED use to meet job, regulatory, or other requirements.

0 Units
8 Lecture hours

NHSN 032
American Heart Association CPR BLS (Formerly NVOC 032)
This course is taught by AHA Instructors and meets the requirements for most nursing programs and clinical facilities. This course teaches both single-rescuer and team basic life support skills for application in both pre hospital and in-facility environments, with a focus on High-Quality CPR and team dynamics. Basic Life Support training reinforces healthcare professionals’ understanding of the importance of early CPR and defibrilation, basic steps of performing CPR, relieving choking, and using an AED; and the role of each link in the Chain of Survival.

0 Units
4 Lecture hours
0 Lab hours

NHSN 030
Personal Care Aide (Formerly NVOC 030)
Corequisite: NHSN 031
Advisory: GED or High School Diploma
This course is designed to prepare students to assist elderly, disabled, and ill individuals living at home. This course will help students enhance their communication skills and knowledge of health environment and procedures for emergencies. Students will also learn to recognize physical, emotional, and developmental characteristics of individuals served; personal hygiene, safe transfer techniques, basic nutrition, and other personal care needs.

0 Units
70 Lecture hours
30 Lab hours
NHSN 050 and NHSN 050L, and pass both courses together, they cannot be taken individually.

0 - Units
72 - Lecture hours

NHSN 050L
Nurse Assistant Pre-Certification Lab
(Formerly NVOC 050L)
Corequisite: NHSN 050
This course is designed for students who have expressed an interest in an entry-level nursing course. This course meets Title 22 regulations for taking care of the geriatric population in a long-term care setting, utilizing skills in basic care, emergency care and communication. The Nurse Assistant Pre-Certification training course lab consists of 135 hours of supervised clinical practice in long-term facilities. This course prepares the student to take the California State Certification Exam to become a Certified Nurse Assistant (CNA). After obtaining the state certification, the student may find employment in the acute care and/or long-term care settings. The California Department of Public Health requires that students must be concurrently enrolled in both NHSN 050 and NHSN 050L, and pass both courses together. They cannot be taken individually.

0 Units
0 Lecture hours
135 Lab hours

NHSN 051
CNA Acute Care Training Course
(Formerly NVOC 051L)
Prerequisite: NHSN 050 and NHSN 050L or California State Nurse Assistant Certification;
Corequisite: NHSN 051L
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for students who are Certified Nurse Assistants that wish to learn the basic nursing skills and duties in the acute care hospital setting with additional emphasis on the specialized acute care areas such as medical/surgical, orthopedics, pediatrics and obstetrics. The Certified Nurse Assistant Acute Care course lab consists of 81 hours of clinical practice alongside a clinical employed CNA in an acute care facility with faculty daily/weekly monitoring. This course includes communication, patient observation, reporting and recording training as well as reinforcement of Certified Nurse Assistant basic-care procedures. The Division of Health Science and Nursing requires that students be concurrently enrolled in both NHSN 051 and NHSN 051L, and successfully complete both courses together. They cannot be taken individually.

0 Units
81 Lab hours

NHSN 052
Home Health Aide Training Course
(Formerly NVOC 052L)
Prerequisite: Nurse Assistant Pre-Certification Training Course/California State Certification;
Corequisite: NHSN 052L;
Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement
This course is designed for students who are Certified Nurse Assistants that wish to learn how to provide personal care in the home care setting for those who are unable to do it for themselves and/or promote the recovery, safety and comfort of the patient. Additional emphasis on rehabilitative nursing care, family relationships and the impact of long-term illness on the family as well as the client will be included. The Home Health Aide training course lab consists of 54 hours of supervised clinical practice in either the Acute Care or Skilled Nursing facility. This course meets the Title 22 regulations for Home Health Aides training programs. The California Department of Public Health requires that students must be concurrently enrolled in both NHSN 052 and NHSN 052L, and pass both courses together. They cannot be taken individually.

0 Units
54 Lab hours

NVOC 018
ACEDD-GIS Skills Development
This course complements the CIV, ARCH, ENGT, LAND and GIS lab and lecture courses and is designed to provide an additional opportunity for students to practice concepts covered in the corequisite courses and enhance their board drafting and CADD skills for work place productivity. These instructional activities are not available in the regular lecture/lab course and are not required for the grade in the corequisite course.

0 Units
1 to 200 Lab hours

NVOC 021
OSHA 10 for General Industry
This course is intended for the individual who needs an overview and/or certification of OSHA safety standards for general Industry workplaces. This course will focus on OSHA’s role in ensuring safe workplaces through hazard awareness and training while providing an overview of safety standard topics such as emergency action plans, fire protection and prevention, material handling, machine guarding, electrical safety, and walking-working surfaces. Upon successful completion of this course and meeting attendance...
Certificate Program

Effective Supervision

This course is intended for the individual who needs an overview and/or certification of OSHA safety standards for the construction workplace. This course will focus on hazard awareness while providing an overview of topics such as fire protection and prevention, material handling, hand and power tools, welding safety, electrical safety, and fall protection. Upon completion of this course and meeting attendance requirements, the student who completes the course will receive a 10-hour Department of Labor (DOL) OSHA Certification Card.

**0 Units**

**14 – 18 Lecture hours**

NVOC 027

OSHA 10 for Construction Trades

This course is intended for the individual who needs an overview of OSHA regulations and/or certification of OSHA safety standards for the construction workplace. This course will cover the fundamentals of OSHA standards for the construction workplace. The course will include discussion of OSHA standards and regulations, including the importance of compliance, the role of the supervisor, and the responsibilities of the supervisor in ensuring a safe workplace. The course will also cover the basics of hazard identification, risk assessment, and proper safety procedures.

**14 – 18 Lecture hours**

NVOC 0029

Effective Supervision Certificate Program

This course is designed for individuals promoted into supervisory positions. The class will assist employers who have promoted line employees with little or no formal supervision training, as well as those anticipating a career that includes supervising other individuals. Topics will focus on six areas comprised of basic supervisory skills and concepts. Students are provided with an overview of what is expected of an effective supervisor and what skills are required to successfully perform in that capacity. Real-life business situations are discussed and evaluated. Students take knowledge gained back to their respective work venues and conversely bring examples to the class for discussion.

**0 Units**

**18 Lecture hours**

NVOC 059

Introduction to Welding Processes

This is an introductory class designed to familiarize the student with several welding processes that are currently used in the welding and metal fabrication industry. This course offers an overview and basic introduction to the theory and practice of a variety of welding and metal cutting methods. This course will emphasize safety, theory, procedure, and practical skill development.

**0 Units**

**1 to 18 Lecture hours**

NVOC 060

Semi-Automatic Welding Processes

This course is designed for the student who wants to progress to an intermediate level of welding processes and further their skills in wire-fed, semi-automatic welding methods and techniques. This course emphasizes skills in gas metal arc welding (GMAW) and flux cored arc welding (FCAW). The course also focuses on safety, theory, characteristics and settings for power supplies and wire feeding units, electric current settings, electrode identification and selection, welding positions, and welding of ferrous and non-ferrous metals. Special emphasis will be placed on developing proficiency and speed for high volume production applications.

**0 Units**

**36 Lecture hours**

**108 Lab hours**

NVOC 061

Production Welding Techniques

This is an intermediate level course focused on welding techniques used in high-volume production manufacturing environments. Students gain proficiency using pulsed-arc and non-pulsed-arc gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW) processes on carbon steel, stainless steel, and aluminum materials. Correct use of welding fixtures, positioners, and other auxiliary equipment are covered. Emphasis is placed on using shop safety in addition to developing proper working procedures.

**0 Units**

**36 Lecture hours**

**108 Lab hours**

NVOC 062

Introduction to Fabrication Processes

This is an introductory level course designed to introduce students to various techniques, processes and technologies used in the Fabrication industry. This course will develop skills necessary for translating dimensional information from a shop drawing or blueprint to metallic materials used for production of finished parts and assemblies. Topics covered in this class will include basic blueprint reading, measurement and measuring tools, layout, metal cutting, drilling and tapping, and metal forming. Emphasis will be placed on shop safety and safe and proper use of equipment, tools and materials.

**0 Units**

**1 to 18 Lecture hours**

**1 to 54 Lab hours**

NVOC 063

Intermediate Fabrication Processes

This course is designed to broaden the students' skills and knowledge of metal fabrication techniques. This course will introduce students to basic hand tools and power tools commonly used in the metal fabrication industry. Topics covered in this course will include structural fabrication, tube bending, stair layout and construction, and fabrication of components from sheet metal. Emphasis will be placed on shop safety and on developing proper working procedures.

**0 Units**

**1 to 18 Lecture hours**

**1 to 54 Lab hours**

NVOC 069

Introduction to Gas Tungsten Arc Welding

Advisory: READ 043 or appropriate placement; WELD 040 or NVOC 059

This course introduces the principles and practices of gas tungsten arc welding (GTAW), including setup/use of GTAW equipment and safe use of tools and equipment. Instruction and practice is provided for gaining proficiency welding carbon steel, stainless steel, and aluminum weld joints in the flat and horizontal positions. Fundamentals of the GTAW process, correct consumables, equipment, and pre-weld preparation will be covered.

**0 Units**

**36 Lecture hours**

**108 Lab hours**

NVOC 070

Advanced Gas Tungsten Arc Welding

Advisory: READ 043 or appropriate placement; WELD 065 or NVOC 069

This course provides further advancement of knowledge and skills in gas tungsten arc welding (GTAW). Emphasis is placed on developing proficiency in welding carbon steel, stainless steel, and aluminum weld joints in the vertical and overhead position. This course exposes students to using positioners, welding fixtures, and tooling commonly used in the workplace. Preparation for welding certification is covered.

**0 Units**

**36 Lecture hours**

**108 Lab hours**

NVOC 071

Basic Electric Arc Welding

Advisory: ENGL 035 or ENLA 100 or appropriate placement; READ 043 or appropriate placement

This course is intended for the student who wants to progress to a basic level of welding processes and further their skills in manual and semi-automatic electric arc welding methods and techniques. This course will emphasize safety, theory, procedure, and practical skill development.
course emphasizes skills in Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW). The course also focuses on safety, theory, characteristics and settings for power supplies and welding units, electric current settings, electrode identification and selection, welding positions, and welding of ferrous and non-ferrous metals. Special emphasis will be placed on developing proficiency and speed for high volume production applications.

0 Units
18 Lecture hours
54 Lab hours

**NVOC 072**
*Manual Electric Arc Welding Processes*

_Advisory: READ 043 or appropriate placement; WELD 040 or NVOC 059_

This course is intended for the student who wants to progress to an intermediate level of welding processes and further their skills in manual electric arc welding methods and techniques. This course emphasizes skills in shielded metal arc welding (SMAW) and gas tungsten arc welding (GTAW). The course also focuses on safety, theory, characteristics and settings for power supplies and welding units, electric current settings, electrode identification and selection, welding positions, and welding of ferrous and non-ferrous metals. Special emphasis will be placed on developing proficiency and speed for high volume production applications.

0 Units
36 Lecture hours
108 Lab hours

**NVOC 080**
*Certification Welding I*

_Advisory: READ 043 or appropriate placement; WELD 055 or NVOC 072_

This course is intended for the student who wants to progress to an advanced level of welding processes and certification. This course offers specialized training and instruction which are necessary to take and pass the written test portion of the City of Los Angeles Department of Building & Safety (LADBS) Certified Welder Examination. This course emphasizes specific skills in shielded metal arc welding (SMAW), flux cored arc welding (FCAW), and gas metal arc welding (GMAW) as it applies to certification in structural steel, light gage steel, and structural aluminum. The course also focuses on safety, welding codes, test preparation, procedures, and destructive testing. Special emphasis will be placed on developing proficiency in order to successfully pass the LADBS exam. This course may be repeated once for certification or licensure standards, only by permit from the division.

0 Units
36 Lecture hours
108 Lab hours

**NVOC 138**
*Engineering Careers & Applications*

This course is for all students interested in the career field of Engineering Design Drafting. Engineering Careers and Applications will explore the career opportunities and training requirements in the field of engineering and engineering technology. Topics will include the history of engineering, careers in engineering, ethics and responsibilities of the engineer, communicating and problem solving.

0 Units
27 Lecture hours
36 Lab hours

**NVOC 140**
*Civil Drafting Fundamentals*

This course is for all students interested in the career field of Civil Design Drafting and Civil Engineering. The course is study of civil design drafting practices and the preparation of drawings used in the civil engineering field. Students will use Computer Aided Drafting (CADD) software to complete projects relating to interpretation of survey data, profiles and cross sections, land subdivision, site and grading plans, underground utilities and structures, concrete and structural detailing.

0 Units
36 Lecture hours
72 Lab hours

**NVOC 150**
*AutoCAD for Basic CADD Applications*

This course is for students preparing for high technology careers who need the skills necessary to function as an entry level CADD operator or to apply CADD to specific disciplines of mechanical and architectural design, manufacturing, illustration and engineering related documents. An overview of computer graphics and CADD (Computer Assisted Design and Drawing) utilizing the latest release of AutoCAD software will be provided. Students will produce 2D orthographic, isometric, and basic 3D models solutions of mechanical and architectural applications.

0 Units
54 Lecture hours
54 Lab hours

**NVOC 170**
*MicroStation for Basic CADD Applications*

This course is for students preparing for high technology careers who need the skills necessary to function as an entry level CADD operator or to apply CADD to specific disciplines of mechanical and architectural design, manufacturing, illustration and engineering related documents. An overview of computer graphics and CADD (Computer Assisted Design and Drawing) utilizing the latest release of MicroStation software will be provided. Students will produce 2D orthographic, isometric, and basic 3D models solutions of mechanical and architectural applications.

0 Units
54 Lecture hours
54 Lab hours

**NVOC 200**
*Intermediate AutoCAD for Design and Production*

This course is for students pursuing degrees or certificates in the Architecture and Engineering Design Drafting Program and for those who wish to enhance their AutoCAD skills for workplace productivity. The course is an intermediate application study in computer aided design, drafting, and graphics using the latest revisions of AutoCAD. Combined with previously learned technical drafting conventions and basic AutoCAD operational skills, students will use AutoCAD to produce detailed drawings that involve model-space and paper-space, 2D and 3D objects, block attributes and viewport scales. Emphasis will be placed on working with multiple drawing files using external files to create mechanical, architectural and civil projects.

0 Units
45 Lecture hours
54 Lab hours

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2019-2020 Catalog

Rio Hondo College / 453
NVOC 241
Civil Engineering Drafting & Design
This course is for all students interested in the career field of Civil Design Drafting and Civil Engineering. Civil Drafting and Design is an intermediate level class in which the practices and the preparation of drawings, pertaining to the civil engineering field, will be expanded to include the development of maps and drawings used for transportation, site development, grading and drainage and road alignment. The student will use Computer Aided Drafting (CADD) to complete the above mentioned projects. Other topics to be covered will include specifications, site details for utilities and underground piping, structural plans and integration of Geographic Information Systems (GIS).
0 Units
36 Lecture hours
72 Lab hours

NVOC 245
Civil Engineering Design & Modeling
This course is for all students interested in the career field of Civil Design Drafting and Civil Engineering. Civil Design & Modeling is an advanced level class which includes design analysis and the preparation of drawings used in the civil engineering field. The student will use civil engineering software, such as InRoads and Land Desktop to design, analyze and develop projects relating to transportation, site development, grading, drainage and road alignment and alternatives. Other topics to be covered are terrain modeling, surface editing, alignment editing, plan, profile, cross-sections, earthwork computations and site planning design.
0 Units
36 Lecture hours
72 Lab hours

NVOC 250
Parametric Modeling 3D Applications for Mechanical Design
This course presents advanced applications of 2D and 3D Computer Aided Design Drafting (CADD) and an introduction to parametric modeling and rapid prototyping utilizing the latest releases of Autodesk Inventor series, SolidWorks, and other parametric modeling software to produce solutions for mechanical applications. Topics covered will benefit all students in areas of study related to Engineering, Drafting, Design and Computer Graphics. Course emphasis is given to CADD generated three dimensional graphics using wire frame, surface modeling, and parametric solids. This course may be taken once for credit towards the major and repeated 2 times to enhance student skills and proficiency levels.
0 Units
54 Lecture hours
54 Lab hours

NVOC 260
Advanced Architecture Using Revit and 3D Software
This course is for students pursuing an advanced study of BIM (Building Information Modeling) applications as they relate to architecture and the AEC industry (Architecture, Engineering, Construction). Utilizing the latest releases of 3D design software such as Revit and AutoCAD Architecture and previously learned technical and architectural drafting conventions, students will produce two and three dimensional BIM generated architectural drawings and 3D virtual models. This course benefits all students studying Architecture, Civil, Engineering of all types, Drafting, Design and Computer Graphics. High technology skills which are necessary to function as a designer or CADD Drafter are emphasized.
0 Units
54 Lecture hours
54 Lab hours

NVOC 261
Revit for Advanced BIM Architectural, Structural and MEP Applications
Advanced BIM (Building Information Modeling) applications extends the fundamentals of the Arch 260 class to include Structural, Mechanical, Electrical and Plumbing extensions of the Autodesk Revit Building software. Students will work on both group and individual projects to create and present three-dimensional representation of architectural solutions. Students will also learn the basic process and workflow in creation of Revit Families for use in building models.
0 Units
54 Lecture hours
54 Lab hours

NVOC 265
Pressure Piping Design
This course is for those students with CAD experience who are interested in the career field of pressure piping design engineering. This course presents the preparation of engineering detail drawings of piping systems for commercial, utilities and industrial plants. Included is information and work dealing with the location, installation, operation, and maintenance of pumps, steam turbines, compressors, vertical vessels, horizontal vessels, tanks, heaters, coolers, cooling towers, condenser, reactors, boilers, chillers, heat exchangers and special equipment.
0 Units
36 Lecture hours
72 Lab hours

NVOC 266
Pressure Piping Applications
This course is for all students with a basic piping design understanding interested in the career field of pressure piping design engineering. This course presents the advanced preparation of engineering detail drawings of piping systems for commercial, utilities and industrial plants. Included is advance information and layout work dealing with the location, installation, operation of pumps, steam turbines, compressors, vertical vessels, horizontal vessels, tanks, heaters, coolers, cooling towers, condenser, reactors, boilers, chillers, heat exchangers and special equipment.
0 Units
36 Lecture hours
72 Lab hours

NVOC 270
SolidWorks for 3D Modeling and Prototype Applications
This course presents an intensive study in 3D computer graphics and CADD (Computer Assisted Design and Drafting) utilizing the latest release of SolidWorks Software. This course benefits all students in areas of study related to Engineering, Drafting, Design and Computer Graphics. Students will produce three dimensional parametric computer generated virtual models incorporating mechanical design refinements. The course emphasizes high technology skills which are necessary to function as a design professional to apply 3D design graphics technology to specific disciplines of mechanical engineering, machine drafting and design, manufacturing, animation, modeling and illustration. Students will be introduced to a variety of means to directly produce prototype models from CADD generated solid geometry.
0 Units
54 Lecture hours
54 Lab hours

NVOC 280
Advanced MicroStation for CADD & BIM Applications
This course is for students pursuing an advanced study in MicroStation 3D parametric CADD (Computer Assisted Design and Drafting) and the BIM (Building Information Modeling) approach to building design using Bentley Architecture. Students will apply previously learned drafting conventions to produce two and three dimensional CADD and BIM generated mechanical and architectural drawings and virtual design models. This course benefits all students studying Architecture, Civil, Engineering of all types, Drafting, Design and Computer Graphics.
High technology skills which are necessary to function as a designer or CADD Drafter are emphasized.

0 Units
54 Lecture hours
54 Lab hours

NVOC 300
Reefinery and Petroleum Safety
Overview
Prerequisite: State Indentured Carpenter Union Apprentice
This course will provide recognized credentials for workers in the refinery and petroleum industry. The training will emphasize Cal-OSHA safety measures including toxicology, hazard communication, and confined space work. Human performance methodologies will be applied to trade related hazards specific to this industry. An in depth discussion and overview of the petroleum and refining process will be conducted.

0 Units
20 Lecture hours

NVOC 1011
Orientation/Safety
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the general trade safety within the carpentry industry. Course topics will include: introduction to the carpenter’s apprentice program, hand tool safety, power tool safety, math, beginning blueprint reading and layouts, trade history and job-site safety.

0 Units
20 Lecture hours
20 Lab hours

NVOC 1012
Health/Safety
This course is designed to meet the needs of Indentured Apprentices with the State of California who are interested in the general trade safety field within the carpentry industry. Course topics will include: Health and Safety Certifications, job safety, fall protection, powder actuated tools, confined space entry, scaffold training, rigging training, aerial lift training, and OSHA training. Certification can be earned in forklift, scaffold, American Red Cross/CPR and Ramset/Redhead low velocity powder actuated tools.

0 Units
112 Lecture hours
112 Lab hours