

DIVISION OF CAREER & WORKFORCE EDUCATION

# CIVIL DESIGN

## ASSOCIATE OF SCIENCE DEGREE

This major provides a focused course of study for students in preparation for careers involving the design and construction of civil engineering projects. The curriculum also puts interested students on the path to licensure as civil engineers. The coursework includes exposure to the broad range of subdisciplines within the field of civil engineering, and closely-related fields such as surveying, architecture, geographic information systems (GIS), and construction. Additionally, the integral coursework focuses on the preparation of common civil project drawings using industry-standard drawing techniques and conventions with hand and/or computer-aided drafting (CAD) tools. As a degree (in contrast to a certificate), this program requires the completion of general education courses; however, if transfer to a university for a baccalaureate or advanced degree is desired, interested students should carefully consider the specific admission and transfer requirements for individual colleges and universities.

To acquire the **Associate of Science Degree in Civil Design**, students must complete the required major courses below with a grade of "C" or better or of "P" if the course was taken on a Pass/No Pass basis, along with either of the following: Rio Hondo College General Education (RHC GE) or California General Education Transfer Curriculum (Cal-GETC). California State University General Education - Breadth (CSU GE) or Intersegmental General Education Transfer Curriculum (IGETC) may be used in some cases; please see a counselor for details.

| Required Courses                                                                                                                                      | Units                | N | IP | C |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---|----|---|
| <b>ENGR/ENGT 100</b> Introduction to Engineering                                                                                                      | <b>2</b>             |   |    |   |
| <b>ARCH/CIV/ENGT 101</b> Intro. to Technical Drawing & Graphics                                                                                       | <b>3</b>             |   |    |   |
| <b>ENGT 150</b> AutoCAD for Basic CADD Applications<br>or<br><b>ENGT 170</b> MicroStation for Basic CADD Applications                                 | <b>4</b>             |   |    |   |
| <b>ARCH 110</b> Construction Document Reading and Estimating<br>or<br><b>ARCH 115</b> Introduction to Residential Architecture:<br>Drawing and Design | <b>3</b><br><b>4</b> |   |    |   |
| <b>CIV 140</b> Civil Engineering & Construction Fundamentals                                                                                          | <b>4</b>             |   |    |   |
| <b>CIV 142</b> Introduction to Land Surveying and GPS                                                                                                 | <b>4</b>             |   |    |   |
| <b>CIV 210</b> Concrete Technology and Testing                                                                                                        | <b>2</b>             |   |    |   |
| <b>CIV 241</b> *Civil Engineering Drafting and Design                                                                                                 | <b>3</b>             |   |    |   |
| <b>Choose a minimum of 5 units from the following:</b>                                                                                                |                      |   |    |   |
| <b>CIV 143</b> *Applications to Surveying and GPS                                                                                                     | <b>4</b>             |   |    |   |
| <b>CIV 245</b> *Civil Engineering Design and Modeling                                                                                                 | <b>3</b>             |   |    |   |
| <b>CIV 290</b> Work Experience Education/Internships for Civil-Related Fields                                                                         | <b>1-4</b>           |   |    |   |
| <b>CIV 299</b> *Directed Study in Civil Design Technology                                                                                             | <b>1-3</b>           |   |    |   |
| <b>GIS 120</b> Introduction to Geographic Information Systems and Spatial Analysis                                                                    | <b>4</b>             |   |    |   |
|                                                                                                                                                       |                      |   |    |   |
| <b>Total major units needed for the Associate of Science</b>                                                                                          | <b>30-34</b>         |   |    |   |
| Units Completed                                                                                                                                       |                      |   |    |   |
| *Prerequisite/Corequisite                                                                                                                             |                      |   |    |   |