

**PROGRAM APPROVAL APPLICATION**  
**NEW or SUBSTANTIAL CHANGE or LOCALLY APPROVED**  
**(This application may not exceed 3 pages)**

**Fill In Form**

Proposed Program Title	<u>Bruce Noble</u>
<u>Civil Design Technology</u>	Voting Member
College	<u>Click here to enter text.</u>
<u>Rio Hondo</u>	Title
District	562 463-7354
<u>Rio Hondo</u>	Phone Number
Projected Program Start Date	<u>Bruce.noble@riohondo.edu</u>
	E-mail Address

**Goal(s) of Program (Check all that apply):**

Career Technical Education (CTE)       Transfer       Other

**Type of Program (Check all that apply):**

A.S. Degree       A.A. Degree      Certificate of Achievement:

18+ semester (or 27+ quarter) units

12-18 semester (or 18-27 quarter) units

**Reason for Approval Request: (Check One)**

New Program       Substantial Change       Locally Approved

**Program Information**

Recommended Taxonomy of Program (TOP) Code      0953.20

Units for Major-Degree      34-36

Total Units for Degree      66

Required Units-Certificate      Click here to enter text.

**Written Form**

1. Insert the description of the program as it will appear in the catalog.

The following Civil Design Technology curriculum will lead to the Associate of Science Degree and prepare students for employment in the field of Civil Engineering as a technician with the potential for more rapid advancement to positions of greater responsibility in surveying and civil construction. Completion of this program is not designed to fulfill the requirements for transfer to a university in Civil Engineering. For Baccalaureate or advanced degrees students will need to complete additional courses in mathematics and physics, please see a counselor for requirements.

2. Provide a brief rationale for the program.

This Associate of Science Degree is designed to prepare students to enter / be employed in the Civil Design Drafting Field as a CAD (Computer Assisted Drawing) drafter / technician. The Civil Design Drafting Field is very diverse with many areas of specialization therefore the degree is built around a number of these specialty areas. The degree also provides helpful electives and required courses for students interested in transferring and pursuing a degree in Civil Engineering.

- List all courses required for program completion, including core requirements, restricted electives and prerequisites. (Push Enter after each entry to begin a new line)

Courses	Course No.	Course Title	Units
<b>Required Core</b>		<b>Required Core</b>	
	ARCH 115	Introduction to Residential Architecture	4
	CIVL 140	Civil Drafting Fundamentals	3
	ENGT 101	Introduction to Technical Drawing & Graphics	3
	ENGT 105	Architectural and Technical Freehand Sketching	2
	ENGT 122	Engineering Design Graphics	4
	ENGT 150	AutoCAD for Basic CADD Applications	4
	Or		
	ENGT 170	MicroStation for Basic CADD Applications	4
<b>Then Select one field of specialization for an additional 13 to 16 units</b>		<b>Then Select one field of specialization for an additional 13 to 16 units</b>	
			35-36 total
	<b>Structures Option</b>		
	CIVL 142	Introduction to Surveying and GPS	4
	ARCH 260	Advanced CADD for Architectural Applications	4
	ARCH 125	Advanced CADD for Architectural Applications	3
	Or		
	ARCH 225	Commercial Wood and Masonry Design and Construction	4
	And		
	ARCH 261	Revit for Advanced BIM Architectural, Structural and MEP Applications	4
	Or		
	ARCH 280	Advanced MicroStation for CADD & BIM Applications	4
	<b>Land Development Option</b>	<b>Land Development Option</b>	34-35 total
	CIVL 142	Introduction to Surveying and GPS	4
	CIVL 143	Applications to Surveying and GPS	4
	CIVL 241	Civil Engineering Drafting and Design	3
	And		
	CIVL 245	Civil Engineering Design and Modeling	3
	Or		
	GIS 120	Introduction to Geographic Information Systems and Spatial Analysis	4
	<b>Piping Option</b>		34-35 total
	ENGT 265	Pressure Piping Design	3
	ENGT 266	Pressure Piping Applications	3
	ARCH 95	Construction Document Reading and Estimating	3
	And		
	ARCH 260	Advanced CADD for Architectural Applications	4
	Or		
	ARCH 280	Advanced MicroStation for CADD & BIM Applications	4
	<b>Transportation Option</b>		34 total
	LOG 120	Transportation Management	3
	GIS 120	Introduction to Geographic Information Systems and Spatial Analysis	4

	CIV 142	Introduction to Surveying and GPS	3
	CIV 241	Civil Engineering Drafting and Design	4
	<b>Environmental Option</b>		34 total
	CIV 142	Introduction to Surveying and GPS	3
	GIS 120	Introduction to Geographic Information Systems and Spatial Analysis	4
	GIS 230	Geographic Information Systems (GIS) in Environmental Technology	3
	ET 280	Green Building Design Principles	3

- Summarize the Labor Market Information and employment outlook (including citation of the source of the data) for students exiting the program.

According to California State and Local job outlook source for this occupational field,

<http://www.labormarketinfo.edd.ca.gov/OccGuides/Detail.aspx?Soccode=173011&Geography=0601000000>

“Employment should decline slightly in this occupation over the forecast period. However, the need to replace those retiring or otherwise leaving the occupation will mean that job opportunities for Drafters are good.”

“Opportunities should be best for individuals with at least two years of postsecondary training in a drafting program that provides strong technical skills as well as considerable experience with CAD/CADD systems. Design software has increased the complexity of drafting applications while enhancing the productivity of Drafters. It also has enhanced the nature of drafting by creating more possibilities for design and drafting. As technology advances, employers will look for Drafters with a strong background in fundamental drafting principles, a high level of technical competence, and the ability to apply their knowledge to a broad range of design challenges”

- List similar programs at other colleges in the Los Angeles and Orange County Region which may be adversely impacted. (Push Enter after each entry to begin a new line)

College	Program	Who you Contacted	Outcome of Contact
None	None	Review of the State Curriculum Inventory	Only 3 other A.S. Degrees in the State in Civil Design Technology. One in Northern California at Redwood Community College and the other in the bay area at Diablo Canyon Community College

- Include any other information you would like to share.

This is a major revision with the primary attempt to reduce the number of units in the existing degree by recognizing that Civil Design Technology is a very vast field and that areas of specialization as opposed to students taking courses in all subjects related to Civil Design would allow more students to achieve the degree.