

# STRUCTURAL ENGINEERING TECHNOLOGY, Certificate - 4581

Engineering & Technology Department

The Structural Engineering Technology certificate is designed for students who intend to pursue an entry-level career position in the field of structural engineering. Structural Engineering is a large specialty discipline within the broader engineering fields, particularly civil and mechanical. Structural Engineering involves the design and execution of large structural projects such as dams, docks, and bridges, tunnels, airport terminals, and railroad structures, in addition, to building frames and foundations. Students participate in team-based projects that allow them to complete basic designs for commercial buildings and other structures. The complete program is only available at the Harrisburg Campus.

## Career Opportunities

Graduates of this program are prepared for entry-level employment as technicians, drafters, reviewers of shop and structural drawings, construction inspectors, and computer-aided drafting and design (CADD) operators in the structural engineering field.

## Competency Profile

This curriculum is designed to prepare students to:

- Assist in the design and development of structures using computer-aided design and drafting (CADD) equipment
- Prepare, interpret, and read technical drawings
- Conceptualize ideas and communicate them to other project team members
- Analyze static structures using trigonometry
- Collect and interpret engineering data
- Identify the student's career path
- Identify global and ethical engineering issues

## PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	CAD 154 Computer Aided Drafting & Design	3	MATH 103 College Algebra	3
	CVTE 103 Surveying	3	MATH 104 Trigonometry	3
	ENGR 102 Engineering & Engineering-Tech Orientation	2	Program Electives*	7
	GTEC 104 Engineering Materials & Processes	3		13
	GTEC 201 Statics	3		
	SET 201 Intro Structural Engineering Technology	3		
		<u>17</u>		

\*Select from the following courses: ACCT 101; ARCH 253; BCT 215; CAD 115, 164; CPS 113, 115, 135; CHEM 101; CVTE 120, 208; ELEC 100, 101, 108, 125, 126; ENGR 291; IA 205, 208; MDRF 101, 103; MATH 119, 121, 202; MGMT 201; MDES 201, 206; PHYS 201, 202; SET 202.

## RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I	
CAD 154	3	GTEC 104	3	CVTE 103	3
ENGR 102	2	GTEC 201	3		
MATH 103	3	Program Electives*	7		
MATH 104	3				
SET 201	3				