

Civil Engineering Technology

Surveying & Geomatics

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This program option will prepare graduates with the technical skills necessary to enter careers in boundary and/or land surveying, geographic and/or land information systems, engineering project surveying, mapping and geodesy, or other related areas. This curriculum Option emphasizes practical applications in the areas of field mapping, interpretation of basic land records and the preparation of maps and plats. Students will learn on modern surveying equipment including total stations, static and kinematic GPS. The use of computers for CAD, data acquisition and analysis is integrated throughout the program preparing graduates for immediate productivity in the profession.

The State of Delaware recognizes the Civil Engineering Technology, Surveying and Geomatics Option as part of the pathway to licensure as a professional land surveyor.

What You'll Learn...

- Solving problems in a logical, systematic way
- Drafting and how to use computer-aided drafting
- Reading and interpreting engineering drawings
- Performing surveys to gather data or layout for a construction project
- Performing standard tests and inspections on various materials
- Interpreting and applying reference and technical information
- Preparing estimates and specifications

What You'll Earn...

- A competitive salary with excellent opportunities for advancement
- A wide array of employment opportunities in departments of natural resources or transportation; material testing laboratories; or civil, surveying, or consulting engineering firms
- The opportunity to broaden and advance your skills in new areas
- The opportunity to practice your profession and, in time, qualify to take a licensing examination to become a registered surveyor or engineer

Why You'll Succeed...

- Many of the higher paying jobs, now and in the future, will be in a technical career field requiring an education beyond high school
- Employees with degrees tend to be more eligible for promotion*
- Associate degree holders generally earn more than high school graduates*
- College credit may be awarded for relevant work experience
- Many credits from an Associate Degree may be applied toward a Bachelor Degree

**Statistics from U.S. Department of Commerce, Bureau of Census*

Civil Engineering

You can enroll in the Civil Engineering Technology on either a full-time or part-time basis. The length of time required to complete an Associate Degree depends on the number of courses you take each semester. Some students may need refresher courses at the basic or pre-tech level; others may receive transfer credit or credit for work experience. Delaware Tech operates on a semester system with new terms beginning in late August and mid-January, plus summer terms beginning at the end of May and in mid-June. You can start taking courses any semester or summer term; however, all technical courses may not be offered every term.

CORE COURSES

Courses	Credits
ENG 121 Composition.....	3
<i>or</i>	
ENG 125 Honors Composition.....	3
ENG 122 Technical Writing & Communication.....	3
<i>or</i>	
ENG 130 Honors Technical Writing & Communication	3
<i>or</i>	
ENG 124 Oral Communications.....	3
<i>or</i>	
ENG 131 Honors Oral Communications.....	3
MAT 181 Algebra and Trigonometry I	4
<i>and</i>	
MAT 182 Algebra and Trigonometry II	4
<i>or</i>	
MAT 185 Precalculus	4
<i>or</i>	
MAT 281 Calculus I.....	4
<i>Select two (2) courses from</i>	
CLT 110 International Cultural Immersion.....	3
ECO 111 Macroeconomics.....	3
<i>or</i>	
ECO 122 Microeconomics.....	3
HIS 111 U.S. History: Pre-Civil War	3
<i>or</i>	
HIS 112 U.S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 121 General Psychology.....	3
SOC 111 Sociology I.....	3

TECHNICAL SUPPORT/COMPUTER COURSES

Courses	Credits
AET 135 Construction Materials & Methods	4
AET 232 Contracts & Specifications.....	3
AET 234 Cost Estimating & Planning	3
EDD 171 Introduction to CAD Using AutoCAD	3
PHY 205 General Physics I	4
<i>or</i>	
PHY 171 Physics I	4
<i>or</i>	
PHY 281 Physics I with Calculus	4

TECHNICAL COURSES

Courses	Credits
AET 123 Drafting/Design.....	4
<i>or</i>	
AET 121 Intro to Arch Drafting.....	4
<i>or</i>	
CET 125 Civil Drafting and Design	4
CET 144 Surveying Principles.....	4
CET 236 Soils.....	3
CET 240 Hydraulics and Hydrology.....	4
CET 244 Principles of Site Development	4
CET 245 Advanced Surveying Principles.....	4
CET 247 Route Surveying and Design	4
CET 248 Boundary Surveying and Law	3
CET 251 Topographic Drafting	3
<i>or</i>	
CET 225 CAD Application for Site Development.....	3

Getting Started

1. Obtain, complete, and submit an Application for Admission with a one-time, non-refundable application fee. Make check or money order payable to Delaware Technical & Community College. Applications may be requested by phone by calling (302)857-1020. or mail, via the Web, or from a high school counselor. Applications may be printed from the Web at www.dtcc.edu/all/forms
2. Develop a financial plan to identify resources (financial aid/SEED/other scholarships) to help pay for college.
3. Take the College Placement Test (CPT) unless college-level math, reading, and English courses have been completed with a "C" grade or better. The CPT will determine appropriate placement and is scheduled by the Admissions Office.
4. Request that high school and/or college transcripts be sent to the Admissions Office.
5. Meet with a Delaware Tech counselor to discuss CPT results.
6. Meet with advisor to plan schedule.

Standards of Excellence

❖ Over 90% of technology graduates are working in their career field