Surveying Option, Advanced Surveying Certificate, Land Surveying Certificate (CETSO, ASC, LSC)

Civil Engineering Technology—Surveying Option (CETSO)

A surveyor enjoys diverse responsibilities as part of his or her everyday routine. Many surveying technicians work outside collecting data, establishing control points, and determining boundary locations. Others work inside an engineering office helping with site design activities and developing plans while using the field data.

Graduates of the Civil Engineering Technology - Surveying Option earn an Associate of Applied Science degree. Coursework includes operating state-of-the-art surveying equipment and computer software, in conjunction with fundamentals of civil engineering and site design. Students also gain specialized knowledge of boundary resolution, subdivision design, geographic information systems (GIS), and global positioning systems (GPS).

Advanced Surveying Certificate (ASC)

The Advanced Surveying Certificate at Cincinnati State, offered in cooperation with Northern Kentucky University, is for graduates of the Civil Engineering Technology—Surveying Option (CETS) or other related associate's degree programs, and serves as the third year of a bachelor's degree program at Northern Kentucky University or the University of Cincinnati.

The certificate program has been approved by the State Boards of Registration in Ohio, Indiana, and Kentucky.

Most courses in the certificate are offered through online education, including classes in geographic information systems (GIS), global positioning systems (GPS), and legal topics.

Students should check with their state licensing board for possible changes to specific requirements before taking any coursework.

Graduates of other associate's degree programs must complete all prerequisite material in the Cincinnati State CETS program prior to acceptance into the certificate program.

Prospective students must meet with the certificate advisor prior to admission to the program.

Land Surveying Certificate (LSC)

The Land Surveying Certificate is for students enrolled in or who have graduated from a bachelor's degree civil engineering programs who wish to pursue Professional Surveying registration in Ohio, Kentucky, or Indiana.

The certificate program offers designated courses required by the Board of Registration for Professional Engineers and Surveyors in these states to qualify for the surveying fundamentals examination.

The certificate program courses are offered in the evening and may be completed in consecutive semesters.

For more information, please contact the Center for Innovative Technologies at (513) 569-1743.

To apply for this program at Cincinnati State, visit our Admissions Page (http://www.cincinnatistate.edu/academics/admission)

Civil Engineering Technology—Surveying Option (CETS)

		Lec	Lab	Credits
Semester 1				
CET 100	Introduction to Civil Engineering Technology (**B**)	2	2	3
CET 105	Introduction to Surveying (**B**)	2	3	3
CET 115	Architectural Drafting and Computer Aided Design (**B**)	2	4	4
MAT 125	Algebra and Trigonometry (**G**)	3	2	4
FYE 1XX First Year Experience Elective (**B**)		1	0	1
Semester 2				
CET 110	Advanced Surveying and Construction Layout (**T**)	2	3	3
CET 120	Advanced Computer Aided Design: Revit Architecture (**T**)	3	3	4
CET 125	Statics and Strength of Materials (CET) (**T**)	3	3	4
ENG 101	English Composition 1 (**G**)	3	0	3
MAT 126	Functions and Calculus (**B**)	3	2	4
Semester 3				
CET 291	Full-Time Cooperative Education 1: Civil Engineering Technology (**T**)	1	40	2
PHY 151	Physics 1: Algebra and Trigonometry-Based (**G**)	3	3	4
Semester 4				
CET 251	Elements of Land Surveying 1 (**T**)	3	2	4
CET 250	Route Location and Design (**T**)	3	2	4
CET 255	Land Information Modeling (**T**)	2	3	3
ECO 110	Principles of Macroeconomics (**G**)	3	0	3
ENG 10X English Composition Elective (**G**)		3	0	3
Semester 5				
CET 252	Elements of Land Surveying 2 (**T**)	3	3	4
CET 260	Control Surveying (**T**)	3	3	4
CET 292	Full-Time Cooperative Education 2: Civil Engineering Technology (**T**)	1	40	2
Semester 6				

CET 265	Subdivision Design and Drainage Control (**T**)	3	3	4
CET 290	Civil Engineering Technology Surveying Capstone (**T**)	1	6	3
COMM 110	Public Speaking (**B**)	3	0	3
Total Credits:		56	127	76

Electives

First Year Experience Elective		
FYE 100	College Survival Skills	1
FYE 105	College Success Strategies	2
FYE 110	Community College Experience	3
English Composition Elective		
ENG 102	English Composition 2: Contemporary Issues	3
ENG 103	English Composition 2: Writing about Literature	3
ENG 104	English Composition 2: Technical Communication	3
ENG 105	English Composition 2: Business Communication	3

The letters G, B, and T (displayed after course titles or elective descriptions) identify types of courses required by the Ohio Department of Higher Education as part of an associate's degree curriculum.

G = General Education course in this curriculum

B = Basic Skills course in this curriculum

T = Technical course in this curriculum

Advanced Surveying Certificate (ASC)

Program Prerequisites: Graduate from the Cincinnati State Civil Engineering Technologies Surveying Option, or complete comparable coursework. Meet with the certificate advisor prior to admission to the program.

Most required courses are offered via online education.

Semester 1		**Lec**	**Lab**	**Credits**
CET 267	Surveying Laws and Ethics	4	0	4
CET 277	Survey Calculations and Statistics	4	0	4
CET 266	Surveying History in Ohio, Kentucky, and Indiana (**T**)	4	0	4
Semester 2				
XXX XXX Science Elective		3	0	3
Semester 3				
CET 287	Geospatial Surveying	4	0	4
Total Credits:		19	0	19

Science Elective		
BIO 131	Biology 1	5
CHE 110	Fundamentals of Chemistry	4
CHE 121 & CHE 131	General Chemistry 1 and General Chemistry 1 Lab	5
EVS 120	Environmental Geology	4
LH 130	Woody Plant Materials	3
PHY 152	Physics 2: Algebra and Trigonometry-Based	4
PSC 105	Astronomy	4
PSC 110	Earth Science	4

Note: Students seeking Surveyor Registration in Indiana must complete (or have previously completed) these courses: MAT 251 (Calculus 1), and six semester hours from the following areas: Freshman Chemistry, Astronomy, Geology, or Dendrology (Woody Plants).

Land Surveying Certificate (LSC)

Program Prerequisite: Enrolled in or a graduate of a four-year Civil Engineering degree program.

This program meets the Ohio State Board of Registration for Professional Engineering and Surveyors requirements for education needed to become eligible for the registration exam for professional surveyors.

Semester 1		**Lec**	**Lab**	**Credits**
CET 251	Elements of Land Surveying 1	3	2	4
CET 267	Surveying Laws and Ethics	4	0	4
CET 266	Surveying History in Ohio, Kentucky, and Indiana (**T**)	4	0	4
Semester 2				
CET 252	Elements of Land Surveying 2	3	3	4
CET 260	Control Surveying	3	3	4
Semester 3				
XXX XXX Technical Elective 1		3	0	3
XXX XXX Technical Elective 2		3	0	3
Semester 4				
CET 250	Route Location and Design	3	2	4
CET 2XX Surveying Elective		4	0	4
Total Credits:		30	10	34

Electives

Technical Electives	
Students seeking registration in Indiana are required to take:	
MAT 251 & PHY 152	Calculus 1 and Physics 2: Algebra and Trigonometry-Based
Students seeking registration in Ohio or Kentucky choose technical electives based the following criteria:	
Select Civil Engineering Technology (CET) courses or other courses approved by Program Chair	
Surveying Elective	
CET 277	Survey Calculations and Statistics 4
CET 287	Geospatial Surveying 4

Faculty

Program Chair/Advisor

Professor Carol Morman, PE, PS, BS
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