

## ENGINEERING

### Civil Engineering & Surveying Technology Applied Surveying Option Associate of Applied Science

#### PROGRAM MISSION

The Applied Surveying Option of the Civil Engineering & Surveying Technology program prepares students with the foundation to enter the workforce with a working knowledge of surveying and geomatics.

#### PROGRAM DESCRIPTION

This degree option includes additional occupational skills training to prepare students with more on-the-job work experience. The option includes 24 credit hours of occupational skills training/cooperative work experience. This is the equivalent of approximately 5 months of fulltime work experience. UCC Engineering faculty advisors will assist with finding placement for occupational skills training/cooperative work experience.

#### PROGRAM OUTCOMES

In addition to the learning outcomes for the Completion Certificate as an Engineering & Drafting Technician, students that complete the Applied Surveying Option AAS degree in Civil Engineering & Surveying Technology will also:

1. Demonstrate multiple forms of communication in well-defined technical and non-technical environments based on appropriate research
2. Conduct and analyze standard test, measurements, and experiments, culminating in the interpreting and reporting of results
3. Participate effectively as a member of a technical team
4. Demonstrate functional use of 3D computer-aided drafting and design software used for a variety of drawing techniques
5. Utilize modern measurement technologies to acquire spatial data

#### CAREER CONSIDERATIONS

The occupational skills training component of the degree option will provide students with on-the-job work experience with local employers.

#### PROGRAM COURSE REQUIREMENTS

##### Year One

##### Program Requirements

CIV 214	Virtual Design -CAD -Civil3D	3
DRF 112	Computer Aided Drafting (CAD) I	3
DRF 113	Computer Aided Drafting (CAD) II	3
ENGR 111	Engineering Orientation	3
ENGR 112A	Problem Solving & Technology	2
ENGR 112B	Problem Solving & Technology	1
ENGR 245	Engineering Graphics -SolidWorks	3
GIS 203	Digital World & Geospatial Concepts	4
GIS 234	GIS: Introduction to Geographic Systems	4
GIS 235	GIS II: Analysis and Applications	4
SUR 161	Surveying I	4

##### General Education Requirements

Human Relations Elective, from Approved List on page 43	3	
MTH 111	College Algebra	5
MTH 112	Elementary Functions	4
WR 121	Academic Composition	4

**Year One Credits 50**

##### Year Two

##### Program Requirements

CIV 280	Cooperative Work Experience*	24
CWE 161	CWE Seminar I	1
SUR 162	Surveying II	4
SUR 163	Route Surveying	4
SUR 242	Land Description & Cadastre	3

##### General Education Requirements

SP 111	Fundamentals of Public Speaking	4
WR 227	Technical Writing	4

**Year Two Credits 44**

\*Note: Each 1 credit hour of Cooperative Work Experience equals 33 hours of on-the-job training.