CIVIL ENGINEERING & SURVEYING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE

Program Description

The Associate of Applied Science (AAS) degree prepares graduates to be job ready after graduation in two years. Some of the courses are application based and will not transfer. However, it is possible to transfer with the AAS degree and a third year of coursework at UCC. Two quarters of calculus are included in the second-year of classes for the AAS degree.

Program Outcomes

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

1. Solve well-designed engineering problems using integrated STEM concepts
2. Examine and design viable engineering solutions for well-defined technical problems
3. Demonstrate multiple forms of communication in well-defined technical and non-technical environments based on appropriate research
4. Conduct and analyze standard test, measurements, and experiments, culminating in the interpreting and reporting of results
5. Participate effectively as a member of a technical team
6. Demonstrate functional use of 3D computer-aided drafting and design software used for a variety of drawing techniques

Career Considerations

Civil engineering and surveying are some of the broadest fields of engineering, and are part of virtually all construction-related projects. Graduates have local, state-wide, and nation-wide employment opportunities. The field of civil engineering deals with planning, design, construction, and maintenance of private and public projects. Projects include highways, bridges, dams, subdivisions, water supply and wastewater systems. Land Surveyors perform a variety of important tasks such as boundary surveys, topographic mapping and construction staking. Civil Engineering and Surveying Technology graduates work with or in support of professional architects, engineers and land surveyors.

Program Course Requirements

Course	Title	Credits
First Year		
First Term		
COM 218Z or PSY 101	Interpersonal Communication or Psychology of Human Relations	3-4
DRF 112	Drafting and Design I	3
ENGR 111	Engineering Orientation I	3
MTH 111Z	Precalculus I Functions (or higher)	4
WR 121Z	Composition I (or higher)	4
	Credits	**17-18**
Second Term		
DRF 113	Drafting and Design II	3
ENGR 112	Problem Solving and Technology	3
MTH 112Z	Precalculus II Trigonometry (or higher)	4
WR 227Z	Technical Writing	4
	Credits	**14**
Third Term		
CIV 214	CAD-Civil 3D-Virtual Design	3
ENGR 245	Engineering Graphics	3
MTH 251	Calculus I	5
SUR 161	Surveying I	4
	Credits	**15**
Second Year		
First Term		
CIV 280	CWE-Engineering	3
ENGR 211	Statics	4
GIS 203	Digital Earth-Geospatial	4
SUR 162	Plane Surveying II [1]	4
	Credits	**15**
Second Term		
CIV 280	CWE-Engineering	3
ENGR 213	Strength of Materials	4
GIS 234	GIS 1-Intro to Geographic Info	4
SUR 163	Route Surveying [1]	4
	Credits	**15**
Third Term		
CIV 280	CWE-Engineering	3
ENGR 212	Dynamics	4
GIS 235	GIS II Data Analysis-App	4
SOIL 205	Soil Science	3
SOIL 206	Soil Science Lab	1
SUR 242	Land Descriptions-Cadastre [1]	3
	Credits	**18**
	Total Minimum Credits	**94-95**

[1] Elective options, see advisor for full list of possible electives.

Advising Notes

- It is strongly recommended that students pursing the AAS degree apply to the UCC Registrar's Office for award of the Pathway Certificates when the coursework is completed, since the certificates are not automatically awarded. Having Pathway Certificates increases employment opportunities
- MTH 112Z can be a corequisite with SUR 161.
- CIV 280 can be taken whenever time and placement with an agency has been set up. Typically completed during summer term. See Program Coordinator for paperwork and forms.
- See advisor for elective options and course prerequisites.