

ENGINEERING

Civil Engineering & Surveying Technology Applied Water Quality Option Associate of Applied Science

PROGRAM DESCRIPTION

This option includes four introductory courses in water and wastewater operations and 24 credit hours of related cooperative work. The equivalent of approximately 5 months of full-time work experience will count towards the 12 months of work experience required for Level I Certification. The coursework will help prepare for the Level I Certification exams. UCC Engineering faculty advisors will assist with finding placement at water and wastewater facilities for cooperative work experience.

PROGRAM OUTCOMES

In addition to the learning outcomes for the AAS Degree in Civil Engineering & Surveying Technology, students that complete the AAS degree in Civil Engineering & Surveying Technology will also:

1. Describe water quality operations for wastewater collection and treatment and water distribution and treatment

CAREER CONSIDERATIONS

All community water and wastewater systems must be operated under the supervision of certified operators. There is a desirable career with low turnover. Many experienced operators are reaching retirement age.

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: Intro to Geographic Systems | 4 |
| GIS 235 | GIS II: Analysis and Applications | 4 |
| SUR 161 | Plane 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

| | | |
|---------|------------------------------|----|
| CWE 161 | CWE Seminar I | 1 |
| WQT 227 | Wastewater Treatment | 3 |
| WQT 228 | Plane Surveying II | 4 |
| WQT 260 | Water Treatment | 3 |
| WQT 261 | Water Distribution | 3 |
| WQT 280 | Cooperative Work Experience* | 24 |

*General Education Requirements

| | | |
|--------|---------------------------------|---|
| SP 112 | Fundamentals of Public Speaking | 4 |
| WR 227 | Technical Writing | 4 |

Year Two Credits 46

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