

ENGINEERING

Water Quality Technician Pathway Certificate

PROGRAM MISSION

The Water Quality Technician Pathway Certificate prepares students with the foundational knowledge and skills in Water Quality Operations.

PROGRAM DESCRIPTION

The Water Quality Pathway Certificate provides introductory coursework for entry-level positions as water and wastewater operators, and to prepare for taking the Level I certification exam. The water quality technology classes in the certificate are found in the Civil Engineering & Surveying Technology, AAS degree.

PROGRAM OUTCOMES

Students who successfully complete the Pathway Certificate in Water Quality will:

1. Demonstrate operating principles of a range of unit processes for environmental control
2. Obtain ABET Accreditation

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

WQT 227	Wastewater Treatment	3
WQT 228	Wastewater Collection	3
WQT 260	Water Treatment	3
WQT 261	Water Distribution	4

Total Credits 13

ENGINEERING

Engineering & Drafting Technician Certificate

PROGRAM MISSION

The Engineering and Drafting Technician Completion Certificate program prepares students with the foundational knowledge and skills to work as a technician in engineering, architectural, public works, and construction environments.

PROGRAM DESCRIPTION

The one-year certificate prepares graduates for entry-level positions as engineering or drafting technicians. All courses in the certificate are found in the Civil Engineering & Surveying Technology, AAS degree.

PROGRAM OUTCOMES

Students who successfully complete the Completion Certificate as an Engineering & Drafting Technician will:

1. Participate effectively as a member of a technical team
2. Utilize modern measurement technologies to acquire spatial data
3. Demonstrate functional use of 3D computer-aided drafting and design software used for a variety of drawing techniques

CAREER CONSIDERATIONS

Engineering and drafting technicians work with and provide technical support to licensed architects, engineers and surveyors. Technicians prepare design drawings and assist with field work. Technicians utilize knowledge of building materials, engineering practices, and mathematics to complete detailed drawings and to collect or evaluate data in the field. Theory and principles of design and graphics are implemented under the direction of engineering or surveying staff.

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

Total Credits 50

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