

ENGINEERING TECHNOLOGY

PATHWAYS CERTIFICATE:
DRAFTING (12 CREDITS), SURVEYING (19 CREDITS), WATER QUALITY TECHNICIAN (13 CREDITS)
GEOGRAPHIC INFORMATION SYSTEMS (12 CREDITS)

CAREER DESCRIPTION

Career Pathway Certificates are short-term educational goals geared towards specific areas in Engineering Technology. These certificates will address the need for a logical pathway of success for students. Students will be able to earn the certificate and then continue on to our existing one-year and two-year programs in a seamless path. These certificates may also lead toward entry-level jobs. Individuals already employed in the profession that want to upgrade their job skills in a specific area may also benefit from these certificates.

PROGRAM OUTCOMES

Drafting

Minimum 12 credit hours. The Drafting Certificate is a career pathway certificate. All courses in the certificate are found in the Civil Engineering and Surveying Technology AAS Degree.

Students who successfully complete the Drafting Pathways Certificate will:

1. Be prepared for entry-level jobs in the area drafting
2. Gain new computer applications and skills

Surveying

Minimum 19 credit hours. The Surveying Certificate is a career pathway certificate. All courses in the certificate are found in the Civil Engineering and Surveying Technology AAS Degree.

Students who successfully complete the Surveying Pathways Certificate will:

1. Be prepared for entry-level jobs on a survey field crew
2. Develop new surveying and drafting skills

Water Quality Technician

Minimum 13 credit hours. The Water Quality Pathways Certificate is a career pathway certificate. All courses in the certificate are found in the Civil Engineering and Surveying Technology AAS Degree.

Students who successfully complete the Water Quality Pathways Certificate will:

1. Be prepared for entry-level jobs in water quality operations
2. Prepare to take Level I Certification Exams

Geographic Information Systems

Minimum 12 credit hours. The GIS pathways certificate is to provide students with the technical skills and geospatial content to employ geospatial information system (GIS) in support of their career and education goals in: science, business, engineering, surveying, and resource management, public safety, and urban and regional planning. GIS 203, GIS 234, GIS 235, and SUR 161 transfer to many Oregon four-year colleges and support current graduates and working professionals as they update their technical skills. The core GIS classes are required in the Civil Engineering and Surveying Technology AAS degree and the AS degree with emphasis in Surveying and Geomatics.

Students who successfully complete the Geographic Information Systems Pathways Certificate will:

1. Collect and input data into a GIS system using: GPS Unit, Digitizing, Geocoding
2. Design and generate various cartographic/map products for planning or presentations
3. Create, manage, and update spatial data
4. Manage information in a GIS database
5. Perform routine data analysis-buffer, query, union, intersect

PATHWAYS CERTIFICATE —

Drafting, Surveying, Water Quality Technician, Geographic Information Systems

Recommended Sequence for Students (Students should see an advisor to customize their educational plan.)

SEQUENCE	Drafting	Computer Aided Drafting I DRF 112 3 CR	Computer Aided Drafting II DRF 113 3 CR	* Approved Drafting Elective 3 CR	Engineering Graphics ENGR 245 3 CR	CREDITS 12	
	Surveying	Surveying I SUR 161 4 CR	Plane Surveying SUR 162 4 CR	Route Surveying SUR 163 4 CR	Land Description & Cadastre SUR 242 3 CR	Elementary Functions MTH 112 4 CR	CREDITS 19
	Water Quality	Water Treatment WQT 260 3 CR	Water Distribution WQT 261 4 CR	Wastewater Treatment WQT 227 3 CR	Wastewater Collection WQT 228 3 CR	CREDITS 13	
	Geographic Information Systems	Digital World and Geospatial Concepts GIS 203 4 CR	GIS I Intro to Geographic Information Systems GIS 234 4 CR	GIS II Analysis and Applications GIS 235 4 CR		CREDITS 12	

NOTES

Scheduling requirements may prevent all courses from being offered every term. Consultation with an advisor is critical to student's selection of courses.

Please see an advisor for a degree planning worksheet for this program.

* Approved Drafting Electives: CIV 214-CAD Civil 3D, CIV 280-CWE, GIS 280-CWE, GIS 234 GIS I Intro to Geographic Information Systems, VC 114 Intro to InDesign or WLD 140 Blueprint Reading and Sketching.