



CERT

Engineering Technology

Drafting, GIS, Surveying, Water Quality

2022-2023

Date of update: 07.21.2022

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## SUMMARY

### PATHWAYS CERTIFICATES

#### DRAFTING, GIS, SURVEYING, WATER QUALITY PATHWAYS CERTIFICATES

There are four pathways certificates offered: 1) **Drafting**: 12 credits (4 classes), 2) **GIS**: 12 credits (3 classes), 3) **Surveying**: 19 credits (5 classes), 4) **Water Quality**: 16 credits (5 classes). The courses are spread out over Fall, Winter, and Spring quarters (will take minimum of 9 months to complete a pathways certificate).

The Drafting and GIS pathways certificates are embedded within the one-year **Engineering & Drafting Technician Completion Certificate**.

The Drafting, GIS, Surveying, and Water Quality pathways certificates are embedded within the two-year **Civil Engineering & Surveying Technology, AAS degree**. However, depending on electives and option selected, the student will choose between the Surveying and Water Quality pathways certificates during the second year of coursework. However, students that have a 3-year academic plan are encouraged to consider both certificates.

It is **strongly recommended** that students pursuing the AAS degree apply to the UCC Registrar's Office for award of the Pathways Certificates as pathways courses are completed or at time of graduation with the AAS degree, since the Pathways Certificates are *not automatically awarded*. The Pathways Certificates will increase employment opportunities for graduates.

For people currently employed or that already have an existing degree, the pathways certificates provide an opportunity for career advancement.

However, for students that have no prior experience in a related field, and are considering only completing a Pathways Certificate, it is recommended the student consider pursuing a one-year, Occupational Skills Training (OST) Certificate, that includes cooperative work experience (on the job training) to supplement the Pathways Certificate courses. There are Engineering program Advising Guides provided for the OST certificates that include Engineering program, pathways certificates.

Term by Term Advising guides for each pathways certificate are provided on the following page

**ADVISING GUIDES**

**Pathways Certificates: Drafting, GIS, Surveying, & Water Quality**

Program Prerequisites: See requirements needed for first term classes.

Possible Term Plan	Course #	Course Title	Credits	Terms	Prerequisites/Notes
Drafting	DRF112	Computer Aided Drafting I	3	F	None
	DRF113	Computer Aided Drafting II	3	W	Prerequisites: CIV112 or DRF112 with a grade of C or better
		Approved Drafting Elective	3		See list of electives below
	ENGR245	Engineering Graphics	3	S	Prerequisites: CIV112 or DRF112 with a grade of C or better

Surveying	SUR161	Surveying I	4	S	Corequisite: MTH112
	SUR162	Plane Surveying II	4	F	Prerequisite: SUR161, with a grade of C or better
	SUR163	Route Surveying	4	W	Prerequisite: SUR162, with a grade of C or better
	SUR242	Land Description & Cadastre	3	S	Prerequisite: SUR161, with a grade of C or better
	MTH112	Elementary Functions	4	F,W, S, Su	Prerequisite: MTH111 or equivalent with a grade of C or better or instructor approval

Water Quality	WQT260	Water Treatment	3	S	Prerequisite: MTH052
	WQT261	Water Distribution	4	F	Prerequisite: MTH052
	WQT226	Wastewater Treatment I	3	F	Prerequisite: MTH052
	WQT227	Wastewater Treatment II	3	W	Prerequisite: MTH052
	WQT228	Wastewater Collection	3	W	Prerequisite: MTH052

Geographic Information Systems	GIS203	Digital World and Geospatial Concepts	4	F	MTH 65 Elementary Algebra
	GIS234	GIS I Intro to Geographic Information Systems	4	W	None
	GIS235	GIS II Analysis and Applications	4	S	GIS 235

	Course Number	Course Number/Title	Credits	Terms	Prerequisites/Notes
Approved Drafting Electives	CIV 214	Computer Aided Drafting- Civil 3D Virtual Design	3	S	DRF 112 CAD I
	CIV 280	Coop. Work Experience	3	F,W,S, Su	None
	DRF116	Structural Drafting	3		DRF 112 CAD I
	GIS 234	GIS I Intro to Geographic Information Systems	4	W	None
	VC 114	Intro to InDesign	3	F	None
	WLD 140	Blueprint Reading & Sketching	3	W	None

Advising Notes	