



Full-Time Pathway to Success

School of Manufacturing, Engineering, and Information Technology

Civil Engineering Technology – Water Resources (10-607-9)

Associate of Applied Science

Effective 2022/2023

The course sequence shown on this sheet is the recommended path to completion. Courses will be scheduled in the terms indicated here.

All courses should be taken in the order shown to help you stay on track and graduate according to your academic plan.

Courses in this program may be offered in a variety or combination of formats (for example: in-person, video conferencing, online, etc.).

I-E = iMET Center/evenings F=Fall, S=Spring, SU=Summer

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E
1	890-155	1	📍 Gateway to Success (G2S)		F+
1	*607-102	2	Conflict Resolution in CET ^{3,6}		F
1	*607-141	2	Construction Basics ^{3,6}		F
1	*607-169	2	Land Surveying Basics ³		F
1	*607-191	1	🎓 Hydrology and Erosion Control ³		F
1	*607-192	2	Water Treatment Pumps		F
1	*607-193	2	🎓 Introduction to Water Chemistry		F
1	804-135	3	Quantitative Reasoning ^{1,6}	Prereq: 834-109	F+
	OR 804-115	5	OR College Technical Math 1 ^{1,6}	Prereq: 834-110	
2	*607-117	2	Geographical Information Systems I ³		S
2	*607-170	2	AutoCAD for Construction Sciences ^{3,6}		S
2	*607-194	2	Freshwater Operations	Prereq: 607-193	S
2	*607-195	2	Wastewater Operations	Prereq: 607-193 Coreq: 607-194	S
2	*607-196	2	Water Distribution Systems	Prereq: 607-193	S
2	*607-197	1	Water Regulations		S
2	801-136	3	English Composition 1 ^{1,6}	Prereq: 831-103 OR 831-107	S+
3	*607-118	2	Geographical Information Systems 2 ³	Prereq: 607-117	SU
3	*607-176	1	Drone and Lidar Surveying		SU
3	*607-187	2	3D CAD: Digital Terrain Modeling ³		SU
3	*614-150	2	3D CAD: Building Information Modeling ³		SU
4	*607-104	3	Building Material & Construction Method ³		F
4	*607-127	3	Civil Engineering and Survey Drafting ³	Prereq: 607-187	F
4	*607-198	2	Stormwater Management	Prereq: 607-191	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F+
4	806-127	4	Chemistry 1	Prereq: 804-197 OR 804-135	F+
5	*607-154	2	Sewer and Water Systems ³	Prereq: 607-104; 804-135 OR 804-115; 607-191	S
5	*607-167	1	Capstone: CET-Freshwater Resources ³	Prereq: Instructor Consent Coreq: 607-195 OR 607-185; 607-198 OR 607-186	S
5	*607-182	2	Sampling and Testing	Prereq: 806-127; 607-195 OR 607-185	S
5	*607-184	2	Environmental Impact	Prereq: 801-136; 607-197 OR 607-183	S
5	809-195	3	Economics ¹	Prereq: 838-105 OR 831-107	S+
5	809-198	3	Psychology, Introduction to ^{1,5,6}	Prereq: 838-105 OR 831-107	S+

Minimum Program Total Credits Required: 64

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.

📍 Mastery of this course will put students on a path to achieve successful degree completion, on-time graduation, and enrich the college experience. Students are required to take this course in their first semester of enrollment. Please see an advisor for details.

🎓 = Milestone Course. Faculty have identified this course as providing a strong foundation for success throughout the program.

(*) indicates students must achieve a combined average of 2.0 ("C") or above for these major courses to meet graduation requirements.

(+) indicates students may take these courses at any one of the three main campuses; Kenosha, Racine, Elkhorn or Online.

Civil Engineering Technology – Water Resources (10-607-9)

Civil Engineering Technology - Water focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. Water is the most important liquid on our planet and the source of life. This program concentrates on water related problems and solutions in public works and the environment in order to help make the lives of everyone better. The first year focuses on the Department of Natural Resources related operations needed to treat water (drinking, waste, and storm water). The second year focuses on sampling and chemical testing of water, storm water management, and environmental impacts. The program is part of Gateway's Construction Sciences Group (CSG) of programs (see Note 4). The program is designed as a fusion of education and hands-on application.

Program Learning Outcomes

Graduates will be able to:

1. Develop 3D computer models, maps, and drawings based on field measurements.
2. Develop a hydrograph model.
3. Develop a surface/groundwater water storage model. Differentiate between the various areas and functions within the profession.
4. Exhibit proper sampling and testing skills.
5. Design storm systems to meet given design requirements.
6. Develop an Erosion Control Plan.
7. Develop a plan to treat freshwater.
8. Develop a plan to treat wastewater.
9. Develop Environmental Reports exhibiting proper and clear documentation and reporting skills.

Essential Career Competencies

Gateway's six essential career competencies are the general attitudes and skills promoted and assessed by all programs. All Gateway graduates will develop skills in:

- Communication
- Professionalism and Career Management
- Cultural Competence
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Technology Competence

Admission Requirements

1. Students must submit an application and pay \$30 fee.
2. Students must meet one of the following: minimum high school GPA of 2.6, minimum college GPA of 2.0, or complete valid reading, writing, and math placement assessments.

Graduation Requirements

1. Minimum 64 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.
3. Complete 890-155 Gateway to Success (G2S) in the first semester.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

Notes

1. Satisfactory college placement results (through multiple measures or placement test scores) or successful remediation is required prior to enrollment. See an advisor for details.
2. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
3. Classes offered at Elkhorn Campus via NODAL delivery. Please see an advisor for details.
4. The programs in the Construction Science Group include: Civil Engineering: Highway Technology, Architectural-Structural Engineering Technician, Civil Engineering Technology: Water Resources, Construction Management Technician, Material Testing Inspector Certificate (add others as approved).
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. A credit for prior learning assessment is available for this course. For more information, please contact cfpl@gtc.edu.
7. Students wishing to transfer onto a four-year degree and want to pursue Calculus courses at Gateway should see an advisor for transfer details regarding math class options instead of taking 804-135.
8. Safety glasses may be required in various classes after the first semester. If prescription safety glasses are required, please allow sufficient time to obtain your glasses prior to the start of the 2nd semester.
9. Field trips to local area job sites may be required as part of the class requirements.

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for one year or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult My Gateway for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.