



Civil Engineering Technology-Highway Technology (10-607-4)

Associate of Applied Science
Effective 2026/2027

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.). More detailed scheduling information for this program can be found at <https://www.gtc.edu/civil-engineering-technology-highway-technology>. Please see your academic advisor for additional information.

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

Term	Course Number	Credits	Course Title	Requisites (prereq-before/ coreq-with)	Notes	I-E	E-E
1	890-155	1	Gateway to Success (G2S)		• Students are required to take this course in their first semester of enrollment. Please see an advisor for details.	F+	F
1	*607-104	3	Building Material & Construction Method		• Faculty have identified this milestone course as providing a strong foundation for success throughout the program.	F	F
1	*607-141	2	Construction Basics			F	F
1	804-134 OR 804-115	3 5	Mathematical Reasoning OR College Technical Math 1	Prereq: 854-760 Prereq: 834-110	• Satisfactory college placement results (through multiple measures or placement test scores) or successful remediation is required prior to enrollment. See an advisor for details.	F+	F
2	*607-102	2	Conflict Resolution in CET			S	S
2	*607-132	3	Structural Mechanics	Prereq: 804-115 OR 804-134 OR 804-135		S	S
2	*607-175	3	Material Testing	Prereq: 607-104; 607-141	• Faculty have identified this milestone course as providing a strong foundation for success throughout the program.	S	S
2	801-136	3	English Composition 1	Prereq: 831-103 OR 851-757	• Satisfactory college placement results (through multiple measures or placement test scores) or successful remediation is required prior to enrollment. See an advisor for details.	S+	S
3	*607-169	2	Surveying Basics		• Faculty have identified this milestone course as providing a strong foundation for success throughout the program.	SU	SU
3	*607-176	1	Drone and Lidar Surveying			SU	SU
3	*607-187	2	3D CAD: Digital Terrain Modeling			SU	SU
3	801-197	3	Technical Reporting	Prereq: 801-136		SU+	SU
4	*607-136	2	Construction Project Management			F	F
4	*607-173	3	Surveying Fundamentals	Prereq: 607-169; 607-187; 804-115 OR 804-134 OR 804-135		F	F
4	*607-177	2	Concrete Repair	Prereq: 607-139 OR 607-175		F	F
4	*607-178	2	Boundary Location and Research	Prereq: 607-169		F	F

(*) Students must achieve a combined average of 2.0 ("C") or above for this major course to meet graduation requirements.

(*) Students may take this course at any one of the three main campuses; Kenosha, Racine, Elkhorn or Online.

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Term	Course Number	Credits	Course Title	Requisites (prereq-before/ coreq-with)	Notes	I-E	E-E
5	*607-117	2	Geographical Information Systems I			S	S
5	*607-161	2	Legal Aspects of Land Surveying	Prereq: 607-169		S	S
5	*607-128	3	Construction Estimating	Coreq: 804-115 OR 804-134 OR 804-135; 801-136		S	S
6	*614-150	2	3D CAD: Building Information Modeling			SU	SU
6	809-195	3	Economics	Prereq: 838-105 OR 851-757		SU+	SU
6	809-198	3	Psychology, Introduction to	Prereq: 838-105 OR 851-757	• Satisfactory college placement results (through multiple measures or placement test scores) or successful remediation is required prior to enrollment. See an advisor for details.	SU+	SU
7	*607-127	3	Civil Engineering and Survey Drafting	Prereq: 607-187		F	F
7	*607-170	2	AutoCAD for Construction Science			F	F
7	*607-191	1	Hydrology and Erosion Control			F	F
8	*607-179	3	Route/Highway Design and Surveying	Prereq: 607-173; 607-127		S	S
8	*607-154	2	Sewer and Water Systems	Prereq: 607-104; 804-115 OR 804-134 OR 804-135; 607-191		S	S
8	*607-166	1	Capstone: CET-Highway Technology	Prereq: Instructor Consent; Coreq: 607-150 OR 607-179; 607-154		S	S
8	*614-138	1	3D Modeling and Virtualization	Prereq: 614-150; 607-187		S	S

Minimum Program Total Credits Required: 65

(*) Students must achieve a combined average of 2.0 ("C") or above for this major course to meet graduation requirements.

(+) Students may take this course at any one of the three main campuses; Kenosha, Racine, Elkhorn or Online.

Civil Engineering Technology – Highway Technology (10-607-4)

Civil Engineering is the profession to solve physical problems related to our civilization in order to help make the lives of everyone better. The program is part of Gateway's Construction Sciences Group (CSG) of programs (see Note 4). This program focuses on a wide variety of aspects beginning with surveying, transitioning into design, and resulting in construction of public works projects. The program is designed as a fusion of education and hands-on application. Embedded in the program is the WTCS MATERIAL TESTING INSPECTOR CERTIFICATE, the educational requirements for becoming a LAND SURVEYOR, and CONSTRUCTION MANAGEMENT courses.

Program Learning Outcomes

Graduates will be able to:

- 1 Utilize graphic techniques to produce engineering drawings.
- 2 Conduct standardized field and laboratory testing on civil engineering materials.
- 3 Utilize modern surveying methods for land measurements and/or construction layout.
- 4 Estimate material quantities and costs for civil engineering projects.
- 5 Utilize geometric elements to develop corridors.
- 6 Design storm systems to meet given design requirements.
- 7 Determine forces and stresses in elementary structural systems.
- 8 Employ productivity software to solve technical problems.

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:

- 1 Communication Competence
- 2 Critical Thinking and Problem Solving
- 3 Professionalism and Career Management
- 4 Teamwork and Collaboration
- 5 Cultural Competence
- 6 Technology Competence

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. The District reserves the right to modify, cancel, or relocate course offerings in response to factors such as low enrollment, resource availability, or other relevant considerations to ensure high-quality educational experiences. Students will be notified in writing and are encouraged to meet with their Academic Advisor to adjust their academic plan.

Admission Requirements

- 1 Students must submit an application and pay \$30 fee.
- 2 Students must meet one of the following: minimum cumulative high school GPA of 2.6 (unweighted); earned at least 12 college credits with a minimum GPA of 2.0; or complete valid reading, writing, and math placement assessments.

Graduation Requirements

- 1 Minimum 65 credits with a cumulative GPA 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 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.
- 2 Classes offered at Elkhorn Campus via NODAL delivery. Please see an advisor for details.
- 3 The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Architectural-Structural Engineering Technician and Construction Management Technician.
- 4 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 804-134.
- 5 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.
- 6 Field trips to local area job sites may be required as part of the class requirements.

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