



Effective 2015/2016

Career Cluster ►



Career Pathway ►

Engineering & Technology

**CIVIL ENGINEERING TECHNOLOGY-
HIGHWAY TECHNOLOGY**

(10-607-4)

Associate of Applied Science Degree
Most Courses Offered at iMET Center

△ Suggested Sequence	✓	Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		607-103 *	Introduction to Civil Engineering & Architecture		2	1-2
		607-104 *	Building Material & Construction Method		3	2-2
		607-169 *	Surveying Basics	Prereq: 834-110 (See Note 1)	2	1-2
		607-170 *	AutoCAD for Construction Science		2	1-2
		804-115	College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198	Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 2		607-102 *	Conflict Resolution in CET		2	1-2
		607-128 *	Construction Estimating	Prereq: 607-104	3	2-2
		607-132 *	Structural Mechanics	Prereq: 804-114 OR 804-115	3	2-2
		607-136 *	Construction Project Management		2	1-2
		607-162 *	Materials Testing	Prereq: 607-104	2	1-2
		607-187 *	3D CAD: Digital Terrain Modeling		2	1-2
		614-150 *	3D CAD: Building Information Modeling		2	1-2
		801-136	English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 3		607-117 *	Geographical Information Systems I		2	1-2
		607-127 *	Civil Engineering Drafting		3	1-4
		607-173 *	Surveying Fundamentals	Prereq: 607-169	3	1-4
		806-154	General Physics 1	Prereq: 804-115	4	3-2
		809-196	Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 4		607-150 *	Survey Construction/ Route/ Highway	Prereq: 607-173	4	2-4
		607-152 *	Elements Inspections/ Contacts/ Specification	Prereq: 607-128	3	1-4
		607-154 *	Sewer and Water Systems		2	2-0
		607-166 *	Capstone: CET-Highway Technology	Prereq: Inst. Cons. Coreq: 607-154	1	1-0
		801-197	Technical Reporting	Prereq: 801-136	3	3-0
Electives		Take 6 elective credits. Any associate degree level course may be taken as an elective.				6
		Suggested Electives: 607-174 Land Surveying – Data Processing (2 Cr) 607-129 Future Trends-Civil/Architecture (2 Cr) 607-134 Steel Design and Detailing (2 Cr) 607-135 Reinforced Concrete Design and Detailing (2 Cr) 607-119 Civil Technology/Internship (1 Cr)				

△ Courses may be taken out of suggested sequence as long as requisites have been met.

**Minimum Program
Total Credits Required**

70



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PROGRAM DESCRIPTION

Civil Engineering Technology – Highway Technology focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The 2nd year focuses on aspects specific to Highway and Public Works. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of Highway Technology.

PROGRAM LEARNING OUTCOMES

Graduates of the Civil Engineering Technology Program should 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.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

- | | |
|--|---|
| 1. Act responsibly | 6. Respect themselves and others as a member of a diverse community |
| 2. Communicate clearly and effectively | 7. Think critically and creatively |
| 3. Demonstrate essential computer skills | 8. Work cooperatively |
| 4. Demonstrate essential math skills | 9. Value learning |
| 5. Develop job seeking skills | |

ADMISSION REQUIREMENTS

1. Students must submit an application and \$30 fee.
2. Students must submit official high school, GED, or HSED transcript.
3. Students must complete reading, writing, math, and computer skills placement assessments.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A 2.0 ("C") or above for these specific major core courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to enrollment in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. 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.
4. Classes offered at Elkhorn Campus via NODAL delivery. See www.gtc.edu for details.
5. Blackhawk Technical College students may take the majority of the core classes in this shared program via NODAL delivery at BTC's Janesville campus.
6. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Geospatial Surveying Technician, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
7. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor 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.

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To schedule an appointment with an advisor, please call 1-800-247-7122.

For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____ . My advisor's contact information is _____ .