Full-Time Pathway to Success

School of Manufacturing, Engineering, and Information Technology

Architectural – Structural Engineering Technician (10-614-6)

Associate of Applied Science

Effective 2024/2025

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

Term	Course #	Cr.	Course Title	Requisites (prereq- before/ coreq-with)	I-E	E-E
1	890-155	1	Gateway to Success (G2S)		F+	F
1	*607-104	3	Building Material & Construction Method[3]		F	F
1	*607-136	2	Construction Project Management[3]		F	F
1	*607-141	2	Construction Basics[3]		F	F
1	*607-170	2	AutoCAD for Construction Sciences[3,5]		F	F
1	804-135 **OR** 804-115	3 5	Quantitative Reasoning[1,5] **OR** College Technical Math 1[1,5]	Prereq: 834-109 Prereq 834-110	F+	F
2	*607-102	2	Conflict Resolution in CET[3,5]		S	S
2	*607-128	3	Construction Estimating[3]	Coreq: 804-115 OR 804-135; 801-136	S	S
2	*607-129	2	Future Trends Civil/Archi Tech[3]	Prereq: 607-104; 607-141 OR 607-103	S	S
2	*607-132	3	Structural Mechanics[3]	Prereq: 804-115 OR 804-135	S	S
2	*614-102	2	Construction Project Management 2[3]	Prereq: 607-136	S	S
2	801-136	3	English Composition 1[1,5]	Prereq: 831-103 OR 851-757	S+	S
3	*607-148	1	Wood-Design & Detailing[3]	Prereq: 607-132	SU	SU
3	*607-169	2	Surveying Basics[3]		SU	SU
3	809-195	3	Economics[1,5]	Prereq: 838-105 OR 851-757	SU+	SU
3	*614-150	2	3D CAD: Building Information Modeling[3]		SU	SU
3	*607-187	2	3D CAD: Dig Terrain Model[3]		SU	SU
4	*607-134	2	Steel – Design and Detailing[3]	Prereq: 607-132	F	F
4	*614-108	1	Residential Code[3]		F	F
4	*614-110	3	Architectural Drafting – Residential[3]	Prereq: 614-150; Coreq: 614-108	F	F
4	*614-140	3	Mechanical Systems for Buildings[3]	Prereq: 607-104	F	F
4	809-198	3	Psychology, Introduction to[1,5]	Prereq: 838-105 OR 851-757	F+	F
4	801-197	3	Technical Reporting	Prereq: 801-136	F+	F
5	*607-135	2	Reinforced Concrete-Design & Detailing[3]	Prereq: 607-132	S	S
5	*614-107	3	Residential and Commercial Inspection[3]	Prereq: 607-104; 614-108 ; Coreq: 614-114	S	S
5	*614-114	2	Commercial Code[3]		S	S
5	*614-115	3	Architectural Drafting – Commercial[3]	Prereq: 614-150; Coreq: 614-114	S	S
5	*614-123	1	Capstone: Architectural Structural Tech[3]	Prereq: 607-134 OR 614-100; Coreq: 614-115; 607-135 OR 614-101	S	S
5	*614-138	1	3D Modeling and Virtualization[3]	Prereq: 614-150; 607-187	S	S

Minimum Program Total Credits Required: 65

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.

Architectural – Structural Engineering Technician (10-614-6)

Architectural-Structural Engineering Technician focuses on a wide variety of aspects within the profession of 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 notes). 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 second year focuses on aspects specific to buildings, both design and structural components. 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 architecture.

Program Learning Outcomes

Graduates will be able to:

1. Develop Construction Documents
2. Evaluate Building Materials
3. Develop building designs
4. Integrate building systems

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 Competence
- 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 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. 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 and advisor for details.
4. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Architectural-Structural Engineering Technician, Construction Management Technician, and Material Testing Inspector Certificate.
5. A credit for prior learning assessment is available for this course. For more information, please contact cfpl@gtc.edu.
6. Students wishing to pursue Calculus courses at Gateway should take 804-115 College Technical Math 1. Please see an advisor for details.
7. 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.