



Effective 2017/2018

Career Cluster ►



Career Pathway ►

Design & Pre-Construction

**ARCHITECTURAL – STRUCTURAL
ENGINEERING TECHNICIAN**

(10-614-6A)

Associate of Applied Science Degree
Most Courses Offered at SC Johnson iMET Center
and Elkhorn Campus

| Δ 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 |
| | | 607-170 | * AutoCAD for Construction Sciences | | 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 & 6) | 3 | 3-0 |
| Semester 2 | | 607-102 | * Conflict Resolution in CET | | 2 | 1-2 |
| | | 607-132 | * Structural Mechanics | Prereq: 804-114 OR 804-115 | 3 | 2-2 |
| | | 607-136 | * Construction Project Management | | 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 |
| | | 809-195 | Economics | Prereq: 831-105 (See Note 1) | 3 | 3-0 |
| Summer | | 607-169 | * Surveying Basics | Prereq: 834-110 (See Note 1) | 2 | 1-2 |
| Semester 3 | | 607-128 | * Construction Estimating | Prereq: 607-104 | 3 | 2-2 |
| | | 607-134 | * Steel - Design and Detailing | Prereq: 607-132 | 2 | 1-2 |
| | | 614-108 | * Residential Code | | 1 | .5-1 |
| | | 614-110 | * Architectural Drafting – Residential | Prereq: 614-150 Coreq: 614-108 | 3 | 1-4 |
| | | 614-140 | * Mechanical Systems for Buildings | Prereq: 607-104 | 3 | 2-2 |
| | | 607-148 | * Wood-Design & Detailing | Prereq: 607-132 | 1 | .5-1 |
| | | 806-154 | General Physics 1 | Prereq: 804-115 | 4 | 3-2 |
| Semester 4 | | 607-135 | * Reinforced Concrete-Design & Detailing | Prereq: 607-132 | 2 | 1-2 |
| | | 614-107 | * Residential and Commercial Inspection | Prereq: 614-108; Coreq 614-114 | 3 | 1-4 |
| | | 614-114 | * Commercial Code | | 2 | 1-2 |
| | | 614-115 | * Architectural Drafting – Commercial | Prereq: 614-110 Coreq: 614-114 | 3 | 1-4 |
| | | 614-123 | * Capstone: Architectural Structural Tech | Prereq: Inst. Cons.; Coreq: 614-115 | 1 | 1-0 |
| | | 614-138 | * 3D Modeling and virtualization | Prereq: 614-150; 607-187 | 1 | 0-2 |
| | | 801-197 | Technical Reporting | Prereq: 801-136 | 3 | 3-0 |
| Minimum Total Program Credits Required | | | | | 64 | |

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



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PROGRAM DESCRIPTION

Architectural-Structural Engineering Technician 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 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 of Architectural-Structural Engineering Tech should be able to:

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

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 complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 64 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. 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.
6. 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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EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES**

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 _____ .