



## Advanced Manufacturing Technology (10-664-2)

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/advanced-manufacturing>. Please see your academic advisor for additional information.

I-D = iMET Center/days, F=Fall, S=Spring, SU=Summer

Term	Course Number	Credits	Course Title	Requisites (prereq- before/ coreq-with)	Notes	I-D
1	890-155	1	Gateway to Success (G2S)		<ul style="list-style-type: none"> <li>Students are required to take this course in their first semester of enrollment. Please see an advisor for details.</li> </ul>	F+
1	*628-109	3	Mechanical Skills for Technicians			F
1	*612-102	3	Intro to Pneumatics & Hydraulics			F
1	*664-100	2	Intro to Industrial Control Systems			F
1	*664-105	2	Intro to Industrial Robots		<ul style="list-style-type: none"> <li>Faculty have identified this milestone course as providing a strong foundation for success throughout the program.</li> </ul>	F
1	*664-110	2	Intro to Mechatronics		<ul style="list-style-type: none"> <li>Faculty have identified this milestone course as providing a strong foundation for success throughout the program.</li> </ul>	F
1	*664-116	2	Intro to Mfg Quality Control Systems			F
2	*620-108	3	Fundamentals of Industrial Controls	Prereq: 664-100		S
2	*664-103	3	Motor Controls for Manufacturing			S
2	*664-104	2	Industrial Control System Applications	Coreq: 664-103; 664-118		S
2	*664-112	3	Fundamentals of Machining Processes			S
2	*664-118	3	PLC & HMI Programming			S
2	804-134	3	Mathematical Reasoning	Prereq: 854-760	<ul style="list-style-type: none"> <li>Satisfactory college placement results (through multiple measures or placement test scores) or successful remediation is required prior to enrollment. See an advisor for details.</li> </ul>	S+

(\*) 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-D
3	*664-120	2	Intro to Industrial Internet of Things (Ilot)			SU
3	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.	SU+
3	809-195	3	Economics	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+
4	*606-128	2	CAD – Solidworks			F
4	*664-119	3	Advanced Manufacturing Network Systems			F
4	*664-121	2	Vision and Smart Sensors	Prereq: 664-118 OR 605-136; 664-103 OR 664-102		F
4	*664-123	2	Advanced Industrial Robotics	Prereq: 664-105; 664-118		F
4	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.	F+
5	*664-113	3	Leadership for Advanced Manufacturing			S
5	*664-115	2	Interpreting Engineering Drawings	Prereq: 804-134 OR 804-135; 801-136		S
5	*664-117	2	Materials and Processes			S
5	*664-124	3	Integrated Systems Capstone	Prereq: Instructor Consent: 664-118; 664-123		S
5	801-198	3	Speech			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.

## **Advanced Manufacturing Technology (10-664-2)**

Advanced Manufacturing Technology combines mechanical, electronic, and information technology into a single discipline that crosses the traditional boundaries of a skilled technician. Advanced Manufacturing technicians need a broad understanding of mechanical and electrical principles, and the use of data to optimize the manufacturing process through intelligent automation. These industry certifications are embedded in the program: Snap on Hand tool Safety, Snap on Multimeter, OSHA 10, and Starrett Precision Measurement.

### **Program Learning Outcomes**

Graduates will be able to:

- 1 Apply state and national safety rules to the manufacturing systems environment.
- 2 Analyze automation within a complex manufacturing system.
- 3 Manage advanced manufacturing systems for operational efficiency and cost control.
- 4 Analyze technical specifications for implementation of manufacturing systems, modules, and components.
- 5 Explore a Proportional Integral Derivative (PID) control system to achieve a desired outcome in a manufacturing outcome.
- 6 Integrate industrial control systems into manufacturing processes.
- 7 Apply electronic principles to devices within a complex manufacturing 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:

- 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 Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days before the program start to obtain prescription and glasses.

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