



### Welding/Maintenance & Fabrication (30-442-2)

Technical Diploma  
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/construction>. Please see your academic advisor for additional information.*

E-D = Elkhorn/days, R-D = Racine/days, E-E = Elkhorn/evenings, R-E = Racine/evenings, F=Fall, S=Spring, SU=Summer

Term	Course Number	Credits	Course Title	Requisites (prereq-before/ coreq-with)	Notes	E-D	R-D	E-E	R-E
1	*442-321	3	Welding / Gas Metal Arc Welding			F/S/SU	F/S/SU	F/S/SU	F/S/SU
1	*442-322	3	Welding / Shielded Metal Arc Welding			F/S/SU	F/S/SU	F/S/SU	F/S/SU
1	*442-323	3	Welding / Gas Tungsten Arc Welding			F/S/SU	F/S/SU	F/S/SU	F/S/SU
2	*442-324	2	Weld Printreading & Fab. Procedures			F/S/SU	F/S/SU	F/S/SU	F/S/SU
2	*442-334	3	Welding/Thermal Cutting			F/S/SU	F/S/SU	F/S/SU	F/S/SU
2	*457-309	2	Metal Fabrication I		<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/S/SU	F/S/SU	F/S/SU	F/S/SU
<b>Minimum Program Total Credits Required: 16</b>									

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

Students interested in continuing into the 31-442-1 Welding program can earn their technical diploma by completing an additional 27 credits. Please see your academic advisor for details..

## **Welding/Maintenance & Fabrication (30-442-2)**

*Welding/Maintenance & Fabrication* provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: Welding/Thermal Cutting; GMAW-gas metal arc welding (wire, MIG, short circuit); GTAW-gas tungsten arc welding (TIG, heliarc); and SMAW-shielded metal arc welding (stick, arc).

### **Program Learning Outcomes**

Graduates will be able to:

- 1 Demonstrate industry-recognized safety practices.
- 2 Interpret welding drawings.
- 3 Produce shielded metal arc welds (SMAW).
- 4 Produce gas metal arc welds (GMAW).
- 5 Perform cutting operations.

### **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 16 credits with a cumulative GPA of 2.0 or above.
- 2 \*Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements, check the Student Handbook or [Graduation Requirements](#).

### **Notes**

- 1 Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days before the program start to obtain prescription and glasses.
- 2 Students are required to have an arc welding helmet, oxy-acet goggles, welding gloves (leather), pliers, and tape measure. Students must be prepared to bring their own equipment.
- 3 Welding PPE kits are available at the campus bookstore.

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