School of Manufacturing, Engineering, and Information Technology

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

Technical Diploma
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.).

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

Term	Course #	Cr.	Course Title		Requisites (prereq- before/ coreq-with)	E-D	R-D
1	*442-321	3	Welding / Gas Metal Arc Welding			F/S/SU	F/S/SU
1	*442-322	3	Welding / Shielded Metal Arc Welding			F/S/SU	F/S/SU
1	*442-323	3	Welding / Gas Tungsten Arc Welding			F/S/SU	F/S/SU
2	*442-324	2	Weld Printreading & Fab. Procedures			F/S/SU	F/S/SU
2	*442-334	3	Welding/Thermal Cutting			F/S/SU	F/S/SU
2	*457-309	2	🎓Metal Fabrication I			F/S/SU	F/S/SU

Minimum Program Total Credits Required: 16

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.

Notes associated with courses (identified by a superscript number at the end of the course title) are located on the back of the sheet.
🎓 = 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.

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:

- Communication Competence
- Critical Thinking and Problem Solving
- Professionalism and Career Management
- Teamwork and Collaboration
- Cultural Competence
- Technology Competence

Admission Requirements

1. Students must submit an application and pay $30 fee.

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.