

# WELDING TECHNOLOGY A.A.S.

The mission of the Welding Technology Program is to provide the regional workforce with credentialed, skilled, and competent welders and to be responsive to emerging workforce needs. The Welding Technology Program prepares students to operate and troubleshoot a variety of welding power sources and related equipment. The program prepares students to solve problems using computational skills and other problem-solving techniques essential to welding and steel fabrication. It also encourages the development of the teamwork and interpersonal skills required on the job.

Welding students develop skills in six different welding processes: oxyacetylene (OAW), shielded metal arc (SMAW), gas metal arc (GMAW), flux core arc, (FCAW), submerged arc (SAW), and gas tungsten arc welding (GTAW). Students also develop additional skills, such as blueprint reading and layout, metallurgy, and gain an understanding of how heating and cooling cycles affect the properties of metals. Students also study the design of jigs and fixtures and how to incorporate these into an automated welding system.

Courses such as Computer Aided Design and Drafting (CADD), OSHA Rules and Compliance, and Related Metals Processes provide for a solid background in the metals industry. Fabrication basics and Metal Design and Construction utilize all of the gained knowledge in an instructor-approved/student-designed project.

Welding technology students have the opportunity to become certified to American Welding Society Standards and receive documentation stating qualifications.

Students are awarded the Certificate of Applied Science upon successful completion of the first year of the Welding Technology program. Students are awarded the Associate of Applied Science degree upon successfully completing the two-year program.

The program often has a waiting list.

## General Associate of Applied Science Requirements

Additional requirements for graduation can be found on the Degree/Certificate Requirements for Graduation page (<https://catalog.umt.edu/academics/graduation-requirements/>).

Unless otherwise noted in individual program requirements, a minimum grade point average of 2.00 in all work attempted at the University of Montana-Missoula is required for graduation. Please see the Academic Policies and Procedures page (<https://catalog.umt.edu/academics/policies-procedures/>) for information on how your GPA is calculated.

Courses taken to satisfy the requirements of an Associate of Applied Science program must be completed with a grade of C- or better unless a higher grade is noted in the program requirements.

## Associate of Applied Science - Welding Technology

### Course Requirements

Code	Title	Hours
<b>Complete all of the following courses:</b>		
BGEN 215	Career Readiness	3
COMX 102	Interpersonal Skills in the Workplace	1
DDSN 113A	Technical Drafting	3
DDSN 114	Introduction to CAD	3
M 105	Contemporary Mathematics	3-4
MCH 114	Related Metals Processes II	3
OSH 110	OSHA 10 Hour Safety Training	1
WLDG 117	Blueprint Reading & Welding Symbols	3
WLDG 145	Fabrication Basics	4
WLDG 180	Shielded Metal Arc Welding	4
WLDG 187	Flux Core Arc Welding	4
WLDG 205	Applied Metallurgy	4
WLDG 210	Pipe Welding - Integrated Lab	4
WLDG 215	GTAW (integrated lab)	4
WLDG 245	Metal Fabrication Design and Construction	4
WLDG 275	Gas Metal Arc Welding	4
WLDG 280	Welding Testing Certification	2
WLDG 285	Automation in Welding	3
WRIT 101	College Writing I	3
<b>Total Hours</b>		<b>60</b>