

WELDING AND METAL FABRICATION TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

Welding is a fall start program only. See an advisor for more information.

The welding industry offers workers immediate tangible rewards for their efforts. Few professions allow the opportunity for creativity found in the fabrication shop. In addition, the fabrication industry represents one of the largest employment segments in our local economy. Graduates may qualify for advanced placement in the Ironworkers, Pipefitters, or Boilermakers unions.

Graduates find work in structural and steel fabrication shops and with heavy equipment rebuilders and manufacturers, mining, refineries, and other energy related enterprises in the region. See our website at www.msbillings.edu/careers (<http://www.msbillings.edu/careers/>) for graduate data.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate safe work practices in the welding and metal fabrication environment.
- Interpret blueprints and apply appropriate construction methods.
- Successfully weld ferrous and non-ferrous metals in all positions with a variety of welding processes.
- Understand basic metallurgy and apply those principles to metal fabrication.

Required Courses

Code	Title	Credits
Required Courses		
CAPP 120	Introduction to Computers	3
COMX 106	Comm in a Dynamic Workplace	3
M 114	Extended Technical Mathematics	3
WLDG 117	Blueprint Rd & Weld Symbols	3
WLDG 124	Welding Theory Tech & Safety	3
WLDG 125	Cut/Shielded Mtl Arc Weld Lab	5
WLDG 126	Shielded Metal Arc Welding Lab	4
WLDG 153	Metal Fabrication Basics	3
WLDG 154	Metal Fabrication Basics Lab	3
WLDG 156	Semi-Automatic Welding	2
WLDG 157	Semi-Automatic & SMAW Lab	5
WLDG 205	Applied Metallurgy	2
WLDG 212	Pipe Welding & Layout	3
WLDG 213	Pipe Welding I Lab	5
WLDG 215	Gas Tungsten Arc Welding	5
WLDG 250	Metals Production	2
WLDG 251	Specialty Weld Processes	5
WLDG 280	Weld Testing Certification	2
WLDG 281	Weld Testing Certification Lab	3
WRIT 122	Intro to Business Writing	3
Suggested Elective		

WLDG 298 Internship/Cooperative Educ

Total Minimum Credits

67

In order to take the first semester of WLDG courses, students must prove their skills in Reading Comprehension and Writing. For more information, please contact the Advising Office.

Suggested Plan of Study

Code	Title	Credits
First Semester		
WRIT 122	Intro to Business Writing	3
WLDG 117	Blueprint Rd & Weld Symbols	3
WLDG 124	Welding Theory Tech & Safety	3
WLDG 125	Cut/Shielded Mtl Arc Weld Lab	5
WLDG 126	Shielded Metal Arc Welding Lab	4
Total		18
Second Semester		
M 114	Extended Technical Mathematics	3
WLDG 153	Metal Fabrication Basics	3
WLDG 154	Metal Fabrication Basics Lab	3
WLDG 156	Semi-Automatic Welding	2
WLDG 157	Semi-Automatic & SMAW Lab	5
Total		16
Summer		
WLDG 298	Internship/Cooperative Educ (optional)	3-9
Total		3-9
Third Semester		
CAPP 120	Introduction to Computers	3
WLDG 205	Applied Metallurgy	2
WLDG 212	Pipe Welding & Layout	3
WLDG 213	Pipe Welding I Lab	5
WLDG 215	Gas Tungsten Arc Welding	5
Total		18
Fourth Semester		
COMX 106	Comm in a Dynamic Workplace	3
WLDG 250	Metals Production	2
WLDG 251	Specialty Weld Processes	5
WLDG 280	Weld Testing Certification	2
WLDG 281	Weld Testing Certification Lab	3
Total		15