

# Welding Technology

## Certificate of Applied Science Degree

Students in the Welding Technology Certificate Program will gain the knowledge and the skills to make satisfactory welds in all positions using the following techniques: shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and flux cored arc welding. Students will also learn how to maintain tools and equipment and they will learn how to read and interpret blueprints. Upon completion of this program, students are eligible to apply to be listed in the AWS National Registry of Welders.

### Job Opportunities

The world is growing and building at a much faster rate than workers can be trained. Welding Technology Certificate Program students' skills will be in high demand in many different settings from the creative arts in a museum district to oil rigs in the Atlantic Ocean. Other places needing students' new skills are: fabrication shops, aircraft contractors, boiler maintenance companies, specialty welding shops, as well as ship building and other transportation industries. According to the Montana Department of Labor, the 2007 median hourly wage was \$15.86. A welding student's salary may grow when an employer sees the completed one year training program and the AWS National Registry of Welders listing.

### Graduates are Prepared to

- Meet safety requirements.
- Produce welds in all positions that meet industry standards using the following process(es):
  - Flux Cored Arc Welding (FCAW)
  - Gas Metal Arc Welding (GMAW)
  - Gas Tungsten Arc Welding (GTAW)
  - Shielded Metal Arc Welding (SMAW)
- Make cuts that meet industry standards in the following process(es):
  - Acetylene Cutting, Welding
  - Air Carbon Arc Cutting (CAC-C)
  - Plasma Arc Cutting (PAC)
- Understand the use of measuring instruments and their purpose
- Understand power sources and current types
- Interpret welding blueprints and weld symbols
- Use basic welding metallurgy
- Use oral and written communication skills in the workplace, including terminology in the welding industry

	Credits	
	Fall	Spring
WLDG 104 - Technical Mathematics	3	
WLDG 110 - Welding Theory I	1	
WLDG 111 - Welding Theory I Practical	3	
WLDG 121 - Welding Theory II Practical	3	
WLDG 117 - Blueprint Reading and Welding Symbols	2	
WLDG 205 - Applied Metallurgy	2	
WLDG 151 - Shop Practices	3	
COMX 222 - Professional Communication		3
WLDG 120 - Welding Theory II*		2
WLDG 122 - Welding Theory III Practical*		3
WLDG 130 - Intro to Structural Welding*		3

WLDG 145 - Fabrication Basics	3
WLDG 185 - Qualification Test Prep*	2
Total Program Credits:	30

\* Indicates prerequisites needed.

A grade of "C-" or above is required for all courses for graduation.

***This program begins in the FALL SEMESTER ONLY and enrollment in this program is LIMITED. Please contact Gallatin College for more information on start dates and enrollment availability.***

### **Font Notice**

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.