

# Welding Technology

## Welding Technology (WELD) Classes

### WELD100G : Basic Welding Technologies

The purpose of the Basic Welding Technologies Course is to provide the student with techniques and manipulative skills required for basic electric arc and fuel gas welding. This course will provide an entry level of technical understanding of basic welding processes as well as power supplies, electrode classifications, joint designs, material identification, blue print reading, numerical geometry and welding safety. This course will provide the training to develop the skills necessary to make basic fillet and square groove welds in the flat position on mild steel material following the American Welding Society standards found throughout the industrial workforce.

**Credits** 6

**Theory Hours** 5

**Lab Hours** 3

**Semester Offered**

Fall semester

### WELD150G : Intermediate Welding Technologies

The purpose of the Intermediate Welding Technologies course is to build on the skills learned from Basic level by adding horizontal, vertical, and overhead welding positions to electric arc and gas welding. This course will also provide the student with techniques and manipulative skills required for gas metal arc welding (MIG) and gas tungsten arc welding (TIG) on mild steel material in the flat only position. Intermediate Welding will increase the student's knowledge area with welding blueprint reading, field sketching, numerical geometry, units of measure, and other associated areas of welding including flux cored arc welding (FCAW), torch brazing and soldering. This course will provide the training to develop the skills necessary to make out-of-position fillet and square groove welds on mild steel material with arc and gas welding as well as basic fillet and square groove welds in the flat position on the mild steel with the MIG and TIG process by following the standards set forth by the American Welding Society used throughout the industrial workforce.

**Credits** 6

**Theory Hours** 3

**Lab Hours** 6

**Prerequisite Courses**

WELD100G: Basic Welding Technologies

**Semester Offered**

Spring semester

### WELD200G : Advanced Welding Technologies

The purpose of the Advanced Welding Technologies course is to utilize the student's skills that were created in the Intermediate Welding course for certification opportunities as well as in manufacturing and repair situations. This course will provide the student with the techniques and manipulative skills for welding pipe and plate to code requirements as well as incorporate fabrication techniques, equipment, specifications, and basic metallurgy, use of associated cutting processes such as Plasma Arc, Air Carbon Arc, mechanized equipment, material identification on alloys, destructive and non-destructive testing methods, welding defects

and discontinuities, and distortion control methods. This course will provide the training necessary to weld exotic materials such as aluminum, fabricate to code environments, and proper repair practices following the American Welding Society standards and specifications used throughout the industrial workforce. This course will create the desired advanced employability skills that are required in today's manufacturing job market.

**Credits** 6

**Theory Hours** 3

**Lab Hours** 6

**Prerequisites**

Intermediate Welding Technologies

**Semester Offered**

Summer semester