

# WELD 110 : Beginning Welding and Metal Fabrication I

**Credits** 15

**Quarter Offered** Fall

First quarter of three-quarter series to produce trade welders qualified to enter the job market. Introduction to American Welding Standards (AWS) in shielded metal arc welding (SMAW), oxy-acetylene flame cutting, welding symbols, joint design, and welding terminology. Learn to lay out, cut, prepare, fit-up, and weld together metal to repair parts and fabricate projects using SMAW. This class may include students from multiple sections.

This class has a \$200 welding course fee.

## **Course Outcomes**

- Identify some common hazards in welding.
- Explain and identify proper person protection used in welding.
- Describe how to avoid welding fumes.
- Explain how to avoid electrical shock.
- Identify and explain the use of oxyfuel cutting equipment.
- Operate oxyfuel station safely.
- Explain the plasma arc cutting processes.
- Prepare and set up plasma arc cutting equipment.
- Identify and explain the carbon arc cutting process.
- Prepare the work area and CAC equipment for safe operation.
- Clean base metal for welding or cutting.
- Identify and explain joint design.
- Mechanically bevel the edge of a mild steel plate.
- Identify and explain codes governing welding.
- Identify and explain weld imperfections and their causes.
- Perform a visual inspection of fillet welds.
- Identify electrodes and their design purpose.
- Set up shielded metal arc equipment.
- Describe methods of striking an arc.
- Make stringer welds in the flat and horizontal position.
- Identify and explain groove welds.
- Set up and weld a groove weld in the flat and horizontal position.