

# WELD 220 : Advanced Welding and Metal Fabrication II

**Credits** 15

**Quarter Offered** Winter

Continuation of welding program designed to increase skills in the gas tungsten arc welding (GTAW) process and provide preparation for the American Welding Society (AWS) certification. Learn to layout, cut, prepare, fit-up, and weld together metal to repair parts and fabricate projects in the GTAW process. This class may include students from multiple sections.

This class has a \$200 welding lab supplies course fee.

**Prerequisites**

[WELD 210](#); enrollment on space-available basis

**Course Outcomes**

- Define Gas Tungsten Arc Welding.
- Distinguish among manual, semiautomatic, and automatic modes of operation.
- Identify where GTAW is used in industry.
- Describe advantages and disadvantages.
- Explain the different types of current needed to weld different types of metal.
- Recall safety precautions regarding GTAW.
- Discuss the correct procedures for the care and maintenance of welding machines.
- Identify and explain functions of shielding gases in a GTAW system.
- Follow precautions for gas regulation procedures.
- List characteristics of aluminum.
- Explain aluminum welding procedures and techniques with DCEP, DCEN and ACHF.
- Explain welding procedures for welding steel using DCEN.
- Explain welding procedures for GTAW of nickel products. (Stainless Steel).
- Explain Torch Manipulation and a variety of welding techniques for pipe.