

# WELDING CERTIFICATE

---

10 Semester Credit Hours; Curriculum: 0250

Welding is a skill used by various trades and welding applications that range from sculptures by home hobbyist to heavy metal fabrication of bridges, ships, and many other projects. The Welding Certificate follows the standards of American Welding Society (AWS) and covers training of the four welding systems including electric arc, oxy-fuel, gas metal arc, and gas tungsten arc welding processes with emphasis on OSHA operational safety requirements. Welders are employed in shipyards, manufacturing, building and construction, industrial maintenance, repair shops and more. This certificate can be completed in one semester.

Code	Title	Hours
<b>Courses for a Certificate</b>		
MFG 102	Industrial Drafting and Design	3
MFG 110	Introduction to Machining	3
MFG 120	Introduction to Welding	4
<b>Total Hours</b>		<b>10</b>

## Program Learning Outcomes

1. Apply OSHA safety standards in various welding applications.
2. Describe fundamental principles of reading welding prints and symbols.
3. Explain the common terms and definitions of a variety of welding processes.
4. Differentiate between the main types of welding processes: Gas Metal Arc (MIG), Gas Tungsten Arc (TIG), Shielded Metal Arc (SMAW), and Resistance Welding (RW).
5. Practice welding in flat, vertical, horizontal, and overhead positions.
6. Demonstrate proper welding procedures and techniques to weld different metal types.
7. Interpret codes, symbols, and standards set by American Welding Society (AWS).