The Welding Technology program provides a competency-based, individualized method of instruction. This program provides training at various levels of competency in the four most common methods of metal joining: shielded metal arc (stick), gas tungsten arc (TIG), oxyacetylene (gas) and gas metal arc (MIG). Plasma welding and cutting, both manual and semi-automatic, are included in various courses. The Welding Technology certificate requires 30 credits in the courses listed below.

**Field of Study Code:** WELD.CER  
**Total Credits Required:** 30

- Manuf 1101 Industrial Design/CAD .................................... 3  
- Manuf 1151 Machine Shop I ............................................. 3  
- Math 1115 Technical Mathematics I .................................. 3  
- Weld 1100 Welding I ....................................................... 3  
- Weld 1112 Oxy-Fuel, Welding, Plasma Cutting and Brazing .................................................. 3  
- Weld 1122 Shielded Metal Arc (SMAW) .................................. 3  
- Weld 1132 Gas Metal Arc (MIG) ........................................... 3  
- Weld 1142 Gas Tungsten Arc (TIG) ...................................... 3  
- Weld 1151 Pipe Welding and Fabrication .............................. 3  
- Weld 1160 Skill Assessment ............................................... 3

Theory and practice in the preparation and welding of steel joints in various positions. Safety, electrode selection, inspection, and testing using shielded metal, gas tungsten, flux core, and gas metal arc welding. Skills are developed in producing different position butt and fillet welds. American Welding Society (AWS) testing is emphasized. The AWS Sense 1 certificate requires 17 credits in the courses listed below.

**Field of Study Code:** WELD.CER.AWS  
**Total Credits Required:** 17

- Weld 1100 Welding I ....................................................... 3  
- Weld 2000 Introduction to AWS Level 1 ................................. 2  
- Weld 2001 AWS Level 1 Shielded Metal Arc Welding (SMAW) .................................................. 3  
- Weld 2002 AWS Level 1 Gas Tungsten Arc Welding (GTAW) .................................................. 3  
- Weld 2003 AWS Level 1 Flux Core Arc Welding (FCAW) ....... 3  
- Weld 2004 AWS Level 1 Gas Metal Arc Welding (GMAW) ....... 3

**Contact Information:**  
If you are considering this program as an area of study, please contact the Business & Applied Technology Division office at 630-942-2592.

**Program web site:**  
https://cod.edu/academics/programs/welding/index.aspx