

WELDING TECHNOLOGY
AAS DEGREE

The Welding Technology program will provide students with the theory and practice in entry-level welding skills. Upon successful completion of the program, students will be prepared for the American Welding Society (AWS) examinations. The **Welding degree** requires a minimum of 64 credits in program requirements, program electives and general education in the courses listed below.

Field of Study Code: WELD.AAS

Program Requirements	41
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
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
Manuf 1101 Industrial Design/CAD	3
Manuf 1151 Machine Shop I	3
Program Electives	5 to 6
Select at least 5 credits from the courses listed below.	
Elmec 1171 Introduction to Robotic Technology	3
Manuf 1121 Physical Metallurgy	3
Manuf 2280 Industrial Safety	2
General Education	18 to 22
(In addition to the courses listed above.)	
Total Credits Required	64 to 69

CERTIFICATE

The Welding 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 certificate** requires 30 credits in the courses listed below.

Field of Study Code: WELD.CER

Total Credits Required	30
Weld 1100 Welding I	3
Weld 1112 Oxy-Fuel, Welding, Plasma Cutting and Brazing	3
Weld 1122 Arc Welding (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
Manuf1101 Industrial Design/CAD	3
Manuf1151 Machine Shop I	3
Math 1115 Technical Mathematics I	3

CERTIFICATE

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 Gas Metal Arc Welding (GMAW)	3