

## Welding Technology Certificate - 30 credits

(Fall 2021)

\*\*\*REMEMBER TO REGISTER EARLY\*\*\*

### Program Description

The Welding Technology Certificate offers seven production technologies courses that provide core skills and six courses with advanced welding skill topics, including: Welding print reading & interpreting symbols, OxyFuel Welding, SMAW (shielded metal arc welding), GMAW (gas metal arc welding), FFAW (flux cored arc welding), GTAW (gas tungsten arc welding), Metallurgy, and hands-on experience through on-site labs.

### Program Outcomes

- Demonstrate proper welder use and safety
- Interpret welding blueprints and drawings
- Interpret weld symbols
- Demonstrate proper welding processes
- Demonstrate cutting process
- Demonstrate various weld transfers
- Select base metals with weld-ability
- Demonstrate weld and setup using GTAW
- Demonstrate weld and setup using GMAW
- Demonstrate proper GMAW wire selection
- Demonstrate proper fabrication layout
- Prepare student for welding certification

### Required Courses

Number	Name	Credits	Term
CMAE 1502	Technical Math	3	
CMAE 1506	Introduction to Computers	2	
CMAE 1510	Print Reading	2	
CMAE 1514	Safety	2	
CMAE 1518	Manufacturing Processes and Production	2	
CMAE 1522	Quality Practices and Measurement	2	
CMAE 1526	Maintenance Awareness	2	
CMAE 1560	Interpreting Symbols	2	
CMAE 1562	Oxyfuel Welding	3	
CMAE 1564	Shielded Metal Arc Welding	3	
CMAE 1566	Gas Metal Arc Welding/Flux Cored Arc Welding	3	
CMAE 1568	Gas Tungsten Arc Welding	3	
CMAE 1570	Metallurgy	1	

**Total Credits 30**

### Pre-program Requirements

There are no specific program prerequisites for this certificate.

For more information about the MSSC Welding Technology Certificate see the program website [360 ETECH Program](https://360etech.org/app/custom/welding_technology) ([https://360etech.org/app/custom/welding\\_technology](https://360etech.org/app/custom/welding_technology))



CIP Code: 48.0508  
Minnesota State Program ID: 13-636-2016  
LSC Major ID: 7111

Created: 5/6/19  
AASC Approval: 1/16/13  
Updated: 2/1/21

All courses in diploma and/or certificate programs are acceptable for credit toward Lake Superior College degree programs as indicated on individual program planners. This is not a contract; Lake Superior College reserves the right to change the planner as necessary. This document is available in alternative formats upon request, by contacting [Disability Services](#) or (218) 733-7650 or MRS/TTY (800) 627-3529.