



Pine Technical & Community College

# Welding Technology

• **Diploma**

Welding Technology

• **Certificate**

Manufacturing Foundations  
Production Technologies

The Welding Technology program will provide students with hands-on skills and technical training in the areas of GMAW, SMAW, GTAW, flux cored arc, and pulse arc welding processes. Skills are also developed in the oxy fuel and plasma cutting processes. Related areas of instruction include interpretation of engineering drawings, blueprint reading, metallurgy, and the American Welding Society (AWS) standard welding symbol interpretation. An integral part of the skills training is a qualification/certification testing program. This is designed to qualify students for the AWS structural code.

In their coursework, students will identify and display proper safety procedures; analyze and apply specific manufacturing process procedures; identify and apply specific quality procedures; identify and select the proper filler metal dependent on base metal to be welded; troubleshoot and solve common problems involved with everyday use of a welding machine; fabricate several welding projects to demonstrate expected skills required by industry standards; interpret symbols and blueprints accurately for a variety of projects; and understand and recognize the need to engage in lifelong learning.

## Recommended Course Sequence for Completion in 1 Year • 2022-2023

### Fall Semester 2022

WELD 1566 Gas Metal Arc Welding (GMAW)/ Flux Cored Arc Welding (FCAW).....	4
WELD 1562 Oxyfuel Welding and Cutting Process .....	2
CMAE 1518 Manufacturing Processes.....	2
CMAE 1514 Safety Awareness.....	2
CMAE 1522 Quality Practices .....	2
CMAE 1526 Maintenance Awareness .....	2
MATH 1251 Technical Math.....	3
<b>Total Credits</b> .....	<b>17</b>

**Manufacturing Foundations Certificate Earned!**

### Spring Semester 2023

WELD 1568 Gas Tungsten Arc Welding (GTAW) .....	4
WELD 1564 Shielded Metal Arc Welding (SMAW).....	4
WELD 1570 Metallurgy and Mechanical Properties of Metals.....	1
WELD 1558 Print Reading for Welders .....	2
WELD 1590 Welding Internship.....	2
COCP 1201 Computer Concepts and Applications .....	2
CCPD 1200 Advanced Career Exploration .....	1
<b>Total Credits</b> .....	<b>16</b>

**TOTAL DIPLOMA CREDITS** ..... **33**

**Welding Technology Diploma Earned!**

**Production Technologies Certificate Earned!**

### Stackable Credits

When you complete the 33-credit diploma, you'll also earn two certificates along the way. Earn the Manufacturing Foundations certificate after the first semester. Earn the Production Technologies certificate after the second semester.

### Career Outlook

Welding and manufacturing professionals are in high demand in Minnesota. Pine Technical & Community College's Welding Technology diploma will give you the education and hands-on experience to prepare you for a high paying career in just one year. Our faculty are experienced in the industry and will provide you with the training employers want.

According to the Minnesota Department of Employment and Economic Development, welders enjoy a 5-star demand rating, and the median wage for welders is \$22.41 – higher than the national average.

[www.pine.edu/apply](http://www.pine.edu/apply)

320.629.5100 • 800.521.7463