



South Central College

WELD 1075 Advanced Welding Lab

Course Outcome Summary

Course Information

Description	Advanced welding lab is a course designed to allow students to utilize all of their skills with capstone project based assignments that prepares students to get their American Welding Society credentials. Students can also focus on a particular skill of choice. (Corequisite: WELD 1011)
Total Credits	4
Total Hours	128

Types of Instruction

Instruction Type	Credits/Hours
Lab	4/128

Pre/Corequisites

WELD 1011

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

- 1. Design a blueprint to build a project to close tolerances.**
Learning Objectives
Sketch a blueprint.
Use proper symbols.
- 2. Apply safety concept while welding.**
Learning Objectives
Wear proper personal protective equipment at all times.
Use all welding equipment safely, as it was designed.
Properly use all hand tools for their designed use without modifying tools.
- 3. Conduct visual inspections of welds.**
Learning Objectives

Use measuring tools.

Inspect key weld elements such as legsize, undercut, overlap, porosity, under fill, convexity, and general appearance.

4. Apply quality concepts to the weldments.

Learning Objectives

Produce projects that are free of weld spatter.

Produce projects that show quality of appearance, placement, and consistency of welds.

5. Display desirable employability skills.

Learning Objectives

Maintain good attendance.

Utilize time well.

Engage in teamwork.

6. Demonstrate proper Shielded Metal Arc Welding (SMAW) techniques.

Learning Objectives

Use proper electrodes for a given SMAW task.

Demonstrate single pass and multiple pass welding techniques.

Demonstrate proper rod manipulation techniques.

Inspect projects for quality.

7. Demonstrate proper cutting techniques.

Learning Objectives

Complete projects using cutting techniques.

Inspect projects for quality.

8. Demonstrate proper Gas Tungsten Arc Welding (GTAW) techniques.

Learning Objectives

Complete projects using GTAW techniques.

Inspect welds for quality.

9. Demonstrate proper Gas Metal Arc Welding (GMAW) techniques.

Learning Objectives

Complete projects using GMAW techniques.

Inspect projects for quality.

10. Demonstrate proper brazing techniques.

Learning Objectives

Complete welding projects using brazing techniques.

Inspect projects for quality.

11. Prepare for the American Welding Society certification.

Learning Objectives

Define the test requirements.

Complete practice tests.

12. Demonstrate proper fabrication techniques.

Learning Objectives

Use measuring tools.

Produce projects that have drilled holes finished by countersinking.

Produce projects that have all sharp edges and corners removed.

SCC Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request

and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: www.southcentral.edu/disability

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.