



South Central College

WELD 1126 Advanced Shielded Metal Arc Welding

Common Course Outline

Course Information

Description	Advanced Shielded Metal Arc Welding (Adv. SMAW) is adding upon the basics taught in the Introduction to Welding certificate. There will be more emphasis on D1.1 3G and 4G groove weld test with backer and without backer. This course will also introduce students to welding pipe and performing the 6G weld test at the end of the course. (Prerequisites: WELD 1025 - Introduction to Shielded Metal Arc Welding or equivalent from another school or instructor approval.)
Total Credits	1
Total Hours	32

Types of Instruction

Instruction Type	Credits/Hours
Lab	1/32

Pre/Corequisites

WELD 1025 - Introduction to Shielded Metal Arc Welding or equivalent from another school or instructor approval

Institutional Core Competencies

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Course Competencies

1. Demonstrate safety in a lab setting.

Learning Objectives

Utilize all safety procedures to ensure safe lab work at all times.
Locate eye protection, eye wash, and emergency power kill switch.
Operate all tools safely and handle materials carefully.

2. Demonstrate how to select correct program and adjust the welding equipment for the welding position and material being welded.

Learning Objectives

Utilize proper equipment settings and programs to weld on specific base metals thickness and positions.

Demonstrate proper rod travel and work angles for the joint being welded.

Differentiate between welding rods and amperages used for root welds, cover passes, vertical up and overhead joints.

3. Model proper use of single pass and multiple pass welding techniques in the vertical up/down, overhead in 3F, 4F, 3G, 4G and 6G on pipe.

Learning Objectives

Describe single pass and multiple pass welding sequence for vertical up/down, overhead and pipe welding.

Utilize all materials and steps necessary to perform a single pass weldment and multi-pass weldment.

Demonstrate proper welding techniques for welding pipe in the 1G, 2G, 3G, 4G and 6G positions.

4. Prepare for American Welding Society D 1.1 certification test.

Learning Objectives

Practice 3G, 4G with and without backer along with 6G pipe tests to pass AWS D 1.1.

Construct final weld coupon for testing in the positions listed above.

Identify defects that may occur during practice weld test and correct the defect.

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 C-112, (507) 389-7222; Faribault: Room A-116, (507) 332-5847.

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.