



South Central College

WELD 1026 Shield Metal Arc Welding II

Common Course Outline

Course Information

Description	This course will expand on information introduced in SMAW I and will provide more practice time with electrodes: types, selection, discussion of power sources. Types of SMAW will be used in various ways, including selection of materials and steps necessary to complete tasks. Duty cycle, cable sizing, arc blow are expanded upon and advantages, limitations, vertical-up and vertical down are explored. Additionally, this course will prepare for AWS D 1.1 Certification. (Prerequisites: WELD 1025)
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Total Credits	1
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Total Hours	32
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Types of Instruction

Instruction Type	Credits/Hours
Lab	1 / 32

Pre/Corequisites

WELD 1025

Course Outcomes

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 SMAW concepts and processes in creating weldments..

Learning Objectives

Utilize proper equipment settings and programs to weld on specific base metals.
Demonstrate proper rod manipulation techniques.
Differentiate between vertical-up and vertical-down welding.
Select materials and processes in regards to duty cycle, cable sizing, and arc blow.

3. Utilize electrodes properly in shielded metal arc welding.

Learning Objectives

Differentiate types of electrodes for specific uses.

Select key components and order of events to properly weld with a stick electrode.
Describe polarity and the appropriate usage of polarity to apply the proper weld.
Apply filler metal in the weld puddle.

4. Model proper use of single pass and multiple pass welding techniques.

Learning Objectives

Describe single pass and multiple pass welding techniques in detail.
Utilize all materials and steps necessary to perform a single pass weldment.
Perform the proper steps in welding a multiple pass weldment.

5. Produce final welding product that withstands testing.

Learning Objectives

Produce high-quality product as a result of welding carbon steel in flat position, horizontal position, and vertical up/down position.
Identify any causes of various welding defects; make necessary adjustments.

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

Learning Objectives

Practice all types of positions necessary to pass AWS D 1.1
Construct final weld coupon for testing.

SCC Accessibility Statement

Disability Services provides accommodations and other supports to students with permanent and temporary disabilities that affect their SCC experience. Disabilities may include mental health (anxiety, depression, PTSD), ADHD, learning disabilities, chronic health conditions (migraine, fibromyalgia), sensory disabilities, and temporary disabilities (broken arm, surgery). Common accommodations are extended test time, private room for testing, audiobooks, and sign language interpreter.

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