

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. WELD

COURSE NUMBER: 1280

NUMBER OF CREDITS: 2

Lecture: 0 Lab: 2 OJT: 0

Course Title:

Intermediate Shielded Metal Arc Welding

Catalog Description:

Intermediate Shielded Metal Arc Welding will have students perform horizontal, vertical, and overhead welding in accordance with American Welding Society procedures. Common joint types in various thicknesses are welding using various electrodes. Some sheet metal will be welded.

Prerequisites or Necessary Entry Skills/Knowledge:

None

FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)

- Goal 1: Communication: By meeting the following competencies:
- Goal 2: Critical Thinking: By meeting the following competencies:
- Goal 3: Natural Sciences: By meeting the following competencies:
- Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- Goal 7: Human Diversity: By meeting the following competencies:
- Goal 8: Global Perspective: By meeting the following competencies:
- Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- Goal 10: People and the Environment: By meeting the following competencies:

Topics to be Covered

Safety and health of welders, use of personal protective equipment, and safety inspection of Shielded Metal Arc Welding equipment and accessories

Set-up of Shielded Metal Arc Welding equipment on carbon steel

Operate Shielded Metal Arc Welding equipment on carbon steel

Demonstrate groove welds in all positions

Inspection of tracks, root passes, intermediate layers, and completed welds

Student Learning Outcomes

Recognize and demonstrate weld shop safety and the use of personal protective equipment.

Demonstrate safe and proper use of Shielded Metal Arc Welding equipment and components.

Identify proper electrode selection.

Evaluate and identify a weld bead's shape with different heat inputs.

Describe stringer beads.

Perform a square butt joint weld in all positions.

Perform a groove weld in plate in all positions with or without backing.

Is this course part of a transfer pathway: Yes No

*If yes, please list the competencies below

Revised Date: 3/29/2022