

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. WELD

COURSE NUMBER: 1230

NUMBER OF CREDITS: 3

Lecture: 1 Lab: 2 OJT: 0

Course Title:
Gas Metal Arc Welding I

Catalog Description:
Gas Metal Arc Welding I provides the student with a thorough technical understanding of Gas Metal Arc welding, welding safety, equipment and set-up, wire and shielding gas classifications and selection. It also provides training to develop the skills necessary to make quality gas metal arc welds on mild steel.

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 in the welding shop
Welding joints and positions
Material preparation
Wire selection
Shielding gases
Gas Metal Arc Welding (GMAW) principles
Gas Metal Arc Welding equipment, set-up, and supplies
Perform quality welds using Gas Metal Arc Welding processes

Student Learning Outcomes
Recognize a safe work environment and the need for personal safety.
Demonstrate weld shop safety.
Demonstrate safe and proper use of Gas Metal Arc Welding equipment and components.
Demonstrate technical understanding of Gas Metal Arc Welding processes.
Perform quality welds in the flat position using Gas Metal Arc Welding processes.
Demonstrate proper adjustment, set-up and operation of Gas Metal Arc Welding equipment.

Is this course part of a transfer pathway: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<small>*If yes, please list the competencies below</small>

Revised Date: 3/29/2022