

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. WELD**

**COURSE NUMBER: 1240**

**NUMBER OF CREDITS: 2**

**Lecture: 0 Lab: 2 OJT: 0**

### Course Title:

Gas Tungsten Arc Welding I

### Catalog Description:

Gas Tungsten Arc Welding I provides the student with a thorough technical understanding of Gas Tungsten Arc welding, welding safety, equipment and set-up, rod and shielding gas classifications and selection. It also provides training to develop the skills necessary to make quality gas tungsten arc welds on non-ferrous metals.

### 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

Rod selection and shielding gas

Gas Tungsten Arc Welding (GTAW) principles

Gas Tungsten Arc Welding equipment, set-up, and supplies

Perform quality welds using Gas Tungsten Arc Welding processes on non-ferrous metals

## Student Learning Outcomes

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

Demonstrate safe and proper use of Gas Tungsten Arc Welding equipment and components.

Demonstrate technical understanding of Gas Tungsten Arc Welding processes.

Perform quality welds using Gas Tungsten Arc Welding processes on non-ferrous metals.

Demonstrate proper adjustment, set-up and operation of Gas Tungsten Arc Welding equipment.

**Is this course part of a transfer pathway:** Yes  No

*\*If yes, please list the competencies below*

Revised Date: 3/29/2022