

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. WELD

COURSE NUMBER: 1190

NUMBER OF CREDITS: 3

Lecture: 1 Lab: 2 OJT: 0

Course Title:
Welding Principles

Catalog Description:
Welding Principles provides the student with details of welding and cutting processes, terminology, joint design, related areas of shop math, measurement, and reading technical drawings.

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
Welding Safety
Physics of Welding
Welding joints and positions
Weld terminology
Oxy-fuel gas cutting equipment and supplies
Plasma Arc cutting equipment and supplies
Shielded Metal Arc Welding equipment and supplies
Gas Metal Arc Welding equipment and supplies
Gas Tungsten Arc Welding equipment and supplies

Shop Math
Technical drawings and sketches

Student Learning Outcomes

Recognize a safe work environment and the need for personal safety.

Describe welding terms and definitions.

Describe welding processes, equipment, and supplies required.

Apply shop math to welding.

Read and interpret welding drawings and sketches.

Demonstrate use of various measurement tools used in welding industry.

Is this course part of a transfer pathway: Yes No

**If yes, please list the competencies below*

Revised Date: 3/29/2022