

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. DSL**

**COURSE NUMBER: 1110**

**NUMBER OF CREDITS: 2**

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

<b>Course Title:</b>
Electrical Theory

<b>Catalog Description:</b>
Electrical Theory discusses circuits, magnetism, wiring diagrams, principles of operation of alternators, regulators, cranking motors, and batteries.

<b>Prerequisites or Necessary Entry Skills/Knowledge:</b>
None

### FULFILLS MN TRANSFER CURRICULUM AREA(S)

- ☐ 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:

<b>Topics to be Covered</b>
Circuits
Magnetism
Wiring diagrams
Alternators
Regulators
Cranking motors
Batteries

<b>Student Learning Outcomes</b>
Describe circuits

Explain magnetism
Construct wiring diagrams
Discuss the principles of operation of alternators
Describe regulators
Describe cranking motors
Identify battery configurations

<b>Is this course part of a transfer pathway:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Revised Date: August, 2021