

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. ELEC**

**COURSE NUMBER: 1240**

**NUMBER OF CREDITS: 5**

**Lecture: 1 Lab: 4 OJT: 0**

<b>Course Title:</b>
Commercial Wiring

<b>Catalog Description:</b>
Commercial Wiring investigates the material and design aspects of commercial wiring. Read commercial blueprints. Perform voltage-drop calculations, motor calculations and service installations. Apply requirements of the N.E.C. as it relates to commercial wiring.

<b>Prerequisites or Necessary Entry Skills/Knowledge:</b>
ELEC 1200

### 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>
Commercial blueprints
Motor conductor size, overcurrent, and ground fault short circuit protection
Commercial wiring methods and materials

<b>Student Learning Outcomes</b>
Exhibit safe work practices
Identify Commercial drawing symbols
Calculate conductor correction factors
Calculate voltage drop

Perform motor calculations
Perform box size calculations
Describe parallel conductor installation
Install a variety of commercial wiring methods
Install lighting and appliance circuits
Apply National Electrical Code requirements

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

Revised Date: 02/14/2020