# Course Outline

**DEPT.** ELEC  
**COURSE NUMBER:** 1240  
**NUMBER OF CREDITS:** 5  
**Lecture:** 1  
**Lab:** 4  
**OJT:** 0

## Course Title:
Commercial Wiring

## Catalog Description:
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.

## Prerequisites or Necessary Entry Skills/Knowledge:
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:

## Topics to be Covered
- Commercial blueprints
- Motor conductor size, overcurrent, and ground fault short circuit protection
- Commercial wiring methods and materials

## Student Learning Outcomes
- Exhibit safe work practices
- Identify Commercial drawing symbols
- Calculate conductor correction factors
- Calculate voltage drop
<table>
<thead>
<tr>
<th>Task</th>
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<tbody>
<tr>
<td>Perform motor calculations</td>
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<tr>
<td>Perform box size calculations</td>
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<tr>
<td>Describe parallel conductor installation</td>
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<td>Install a variety of commercial wiring methods</td>
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<td>Install lighting and appliance circuits</td>
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<td>Apply National Electrical Code requirements</td>
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| Is this course part of a transfer pathway: | Yes ☐ No ☒ |

Revised Date: 02/14/2020