COURSE OUTLINE

DEPT.  ELEC  COURSE NUMBER: 2225

NUMBER OF CREDITS: 4  Lecture: 1  Lab: 3

Course Title:
Electric Motor Controls II

Catalog Description:
Describe electromechanical and solid state relays, photoelectric controls, proximity controls, reduced voltage starting, accelerating and decelerating methods and preventive maintenance.

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:

Prerequisites or Necessary Entry Skills/Knowledge:
ELEC 2205
**Topics to be Covered (General)**

- Advanced motor control circuits
- Motor breaking methods
- Motor starting methods
- Proximity controls
- Predictive and preventive maintenance

**Student Learning Outcomes**

<table>
<thead>
<tr>
<th>Describes motor stopping methods</th>
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<tr>
<td>Describes reduced voltage starting methods</td>
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<td>Describes types of photoelectric controls</td>
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<td>Describes types of proximity controls</td>
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<td>Describes solid state relays, and motor starters</td>
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<td>Describes variable frequency drives</td>
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<tr>
<td>Develops complex motor control circuits</td>
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<td>Wires photoelectric sensors</td>
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<td>Wires proximity sensors</td>
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<td>Wires complex control circuits</td>
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<td>Demonstrates predictive and preventive maintenance practices</td>
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**Is this course part of a transfer pathway:** Yes ☐ No ☒

*If yes, please list the competencies below*

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Revised Date: 02/14/2020