Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. **ELEC**

**COURSE NUMBER:** 2220

**NUMBER OF CREDITS:** 3

| Lecture: 1 | Lab: 2 |

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**Course Title:**
Industrial Wiring

**Catalog Description:**
This course covers components for industrial electrical installations and operations. Students will learn to design and calculate electrical loads for an industrial application.

**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 1220
### Topics to be Covered
- Basic knowledge of threaded conduits and fittings.
- The importance of grounding and bonding.
- The selection and sizing of motors and transformers.

### Student Learning Outcomes
- Demonstrate electrical safety.
- Identify National Electrical Code requirements.
- Describe conduit types, conduit sizes, and conduit fittings.
- Demonstrate how to cut, ream, and thread conduit.
- Demonstrate how to operate a hydraulic bender.
- Demonstrate bending conduit stubs, off-sets, three-bend saddles, four-bend saddles, and kick bend.
- Perform all work in a professional and safe manner.
- Demonstrate how to operate a conduit threading machine.

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

Revised 2/20