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. ELUT COURSE NUMBER: 2100

NUMBER OF CREDITS: 3 Lecture: 2 Lab: 1 OJT 0

Course Title:
Electrical Metering

Catalog Description:
This course covers single-phase metering principles, meter construction, component parts and installation and testing of single-phase electric watt-hour meters. This course also includes the use of a meter test bench, test standards and an electric counter.

Prerequisites or Necessary Entry Skills/Knowledge:
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:
Topics to be Covered

- Simple rules of safety and hazards involved with testing and installing electrical meters
- Single-phase watt-hour meters, both self-contained and instrument rated meters
- Instrument transformer hazards

Student Learning Outcomes

1. List the advantages and limitations of using an electro magnet moving coil meter ac voltage, current, and watts.
2. Describe the construction and operation of single-phase watt-hour meters (both self-contained and instrument transformer rated).
3. Define the connection and formulas to be used to test the accuracy of a single-phase watt-hour meter.
4. Test, calibrate, and describe the test used in testing single-phase meters.
5. Describe the construction and use the meter test equipment.
6. Calculate the metered power of a load connected to a watt-hour meter by the use of the formulas.
7. Describe and identify the equipment used in metering with instrument transformers.
8. Wiring single phase and 3 phase meters

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

Revised Date: October, 2020