Course Title: Transformers

Catalog Description:
Describe basic transformer theory, construction, installation and troubleshooting of single phase and three phase transformers. Examine types of transformers including isolation, autotransformer and instrumentation transformers.

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:

Prerequisites or Necessary Entry Skills/Knowledge:
Topics to be Covered (General)
- Single phase transformer construction, operation and calculations
- Three phase transformer construction, operation and calculations
- Single phase and three phase transformer connections

Student Learning Outcomes
- Identify types of transformers
- Describe magnetic induction as it relates to transformer theory
- Explain step-up/step-down transformers
- Calculate power, voltage and current in a transformer circuit
- Design transformer connection diagrams
- Connect various types of transformers most commonly used in the electrician field
- Prove transformer operation
- Test values of voltage, current and power in a transformer circuit
- Apply National Electrical Code standards

Is this course part of a transfer pathway: Yes [ ] No [ ]

New Course December 2019