

ELE 136 - INTERMEDIATE ELECTRICAL STUDIES II

Course Description

This course will introduce the intermediate electrical student and/or the apprentice electrician to new residential and commercial electrical concepts and reinforce concepts and skills learned in previous courses. Concepts include distribution equipment, transformers, commercial electrical services, motor calculations, motor controls, and voice data and video. Participants will also apply code rules from the National Electrical Code. Completion of this course will result in a Level 3 National Center for Construction Education Research Credential. Group 2 course.

Credit Hours

3

Contact Hours

4

Lecture Hours

2

Lab Hours

2

Required Prerequisites

ELE 132

Course Learning Outcomes

Knowledge:

- Identify various components of voice data systems.
- Describe various sizes and types of transformers.
- Recognize various types of distribution equipment.

Application:

- Calculate the horsepower for motors.
- Formulate appropriate motor controls for various applications.

Integration:

- Integrate distribution equipment, transformers, commercial electrical services in commercial and industrial settings.

Human Dimension:

- Take responsibility for completing work in a neat and proficient manner.

Caring - Civic Learning:

- Commit to the safety and wellbeing of everyone on the job site and the end user.
- Value the importance of electricity and the electrical field to daily life.

Learning How to Learn:

- Construct knowledge about the use of logic in electrical studies.
- Reflect on their ability to use the National Electric Code, the State of Michigan Electrical Administrative Laws and OSHA Construction and Electrical safety rules effectively.