

# ELE 126 - BEGINNING ELECTRICAL STUDIES II

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- 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.

## Course Description

This course will introduce the beginning 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 motor theories, conductor terminations and splices, grounding and bonding, circuit breakers and fuses, control systems and fundamental concepts, and alternating current. Participants will also apply code rules from the National Electrical Code. Completion of this course will result in a Level 2 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 122

## Course Learning Outcomes

### Knowledge:

- Identify different voltages as it relates to AC (alternating current) power sources.
- Describe different motor types and their applications.
- Recognize appropriate conductor terminations and splices.

### Application:

- Assess grounding and bonding in various electrical installations.

### Integration:

- Install and size overcurrent protection devices (OCPD) based on conductor and motor sizing.
- Integrate alternating current motors with conductor terminations using appropriate splicing, grounding and bonding techniques based on electrical blueprints for 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: