

ELE 107 - INTRODUCTION TO ELECTRICAL II

- 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 electrical student and/or the apprentice electrician to the electrical field by exploring all basic electrical concepts in residential wiring. Concepts include properly sizing and installing electrical junction and device boxes, hand bending conduit, installing wireways, raceways, fittings, and fasteners, sizing conductors and cables, and reading electrical blueprints and construction documents. Participants will also apply code rules from the National Electrical Code. Completion of this course will result in a Level 1 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 101

Course Learning Outcomes

Knowledge:

- Identify appropriate electrical junction and device box sizes.
- Identify appropriate conductors and cables for various applications.
- Recognize characteristics of electrical blueprints and construction documents.
- Identify hand bending conduit, other wireways, raceways, fittings and fasteners.

Application:

- Install electrical junction and device boxes.
- Implement conduit hand bending techniques.
- Install wireways, raceways, fittings and fasteners.
- Design build conductor and cable systems.

Integration:

- Integrate wireways and raceways, hand bending techniques, fittings and fasteners, and conductor and cable systems based on electrical blueprints for residential and commercial 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: