

ELE 146 - ADV. INDUSTRIAL ELECTRICAL

Course Description

Through structured classroom and hands-on skill building, the student will learn power factor, ventilating, air conditioning, and other facilities, system protection, lightning protection, site lighting, programmable logic controllers, developing a program for a PLC, fiber optics, hazardous locations, and harmonics. Group 2 course.

Credit Hours

3

Contact Hours

4

Lecture Hours

2

Lab Hours

2

Required Prerequisites

ELE 142

Course Learning Outcomes

Knowledge:

- Identify Environmental Systems.
- Explain variances on the electrical system.
- Articulate the concept of Automation.

Application:

- Determine the variances discovered on the electrical system like Harmonics.
- Develop an introductory PLC program.
- Design the lighting needs and layout.
- Calculate the demands of various safety and environmental systems.

Integration:

- Synthesize all the systems together incorporating various environments to the electrical safety system.
- Evaluate the world of automation and programming logic.

Human Dimension:

- Analyze industrial and manufacturing job prospects.
- Recognize industry requires and demands knowledgeable electricians.

Caring - Civic Learning:

- Demonstrate the depth and level of understanding of the electrical systems.

Learning How to Learn:

- Initiate programming options showing uses and practical applications.