ELE 121 - ADV RESIDENTIAL ELECTRICAL

Course Description

Through structured classroom and hands-on skill building, the student will learn advanced residential wiring techniques including: workshop circuits, special purpose outlets, gas and oil central heating systems, lowvoltage wiring, alarms and security systems, service entrance equipment, overcurrent protection, service entrance calculations, swimming pools, home automation systems, and standby power systems. Group 2 course.

Credit Hours ³ Contact Hours

Lecture Hours

Lab Hours

Required Prerequisites

ELE 105

Course Learning Outcomes

Knowledge:

- Describe what makes up low voltage in the home.
- Recall swimming pool precautions.
- Explain service load calculations.
- Assemble home security/smoke alarms.

Application:

- Calculate the home service load.
- · Identify the location of in-home security/safety measures.
- Develop a plan for proper grounding/bonding of pools, spas, and hot tubs.

Integration:

- Perform Advanced Residential wiring techniques.
- · Integrate Smart home wiring.
- Explain proper location and installation of residential services.

Human Dimension:

- Recognize opportunities for self-employment.
- · Relate to the complexity of electrical wiring/contracting.

Caring - Civic Learning:

· Recognize there will always be a need for knowledgeable electricians.

Learning How to Learn:

· Estimate the proper circuiting of a residential service.