

Course Title: Electrical Engineering for Non-Electrical Engineers

Course Code: EEA 170

Course Background / Summary:

This course is designed for non-electrical professionals who work with electrical equipment. It covers fundamental electrical concepts, power systems, equipment service factors, and voltage regulation. Participants will learn about electric power bill calculations and gain an understanding of transformers, motors, and generators. Hands-on base practical sessions will be key features of this training. The practical session will give the trainee a “hands-on” feel of common electrical components which include a power circuit breaker, contactor, overload relay, ac drive, and more.

Course Objectives:

- Describe the electrical magnitudes and solve power and energy calculations.
- Identifying the electrical equipment and the components and performing wiring installation with safety consideration.
- Discuss principles and equations governing the operation and performance of transformers, electric motors, AC drive, and generators.
- Solve electric power bill calculation in the residential, commercial, and industrial arena.

Target Audience:

- Non-electrical professionals

Course Duration: 3 Days

Course Contents

1.0 DC Circuit Analysis & Basic Electronic Devices

2.0 Alternating Current (AC) Fundamentals

3.0 DC & AC Power, Power Factor

4.0 Transformers, Electric Motors & Generators

5.0 Single-phase and Three-Phase System

6.0 Electrical & Controls Drawings