

# Fundamentals of Electrical, Electronics & Control Engineering

Date	Venues	(\$)Fees	Book your seat
21 Jan -25 Jan 2024	Cairo	2900	Register Now

## **Course Overview:**

This course applies fundamental electrical engineering principles to oil and gas facilities. The course is designed
for Facilities Engineers who interface with electrical systems, and provides practical insight and development of
new Facilities Electrical Engineers

## Course Objective:

- The key components of facilities electric power distribution, which include circuit arrangements, low and medium voltage switchgear, and single-phase and three phase schemes
- Operation, components, electromotive forces, turns and voltage ratios, losses, efficiency, rating, and connections
  of transformers
- The difference between direct current, induction and synchronous current motors, motor enclosures, and how to select motors
- The principles of protecting electrical equipment, including time current curves, fuses, circuit breakers, and coordination
- · What standby power is, including generators and UPS power systems
- The purpose for power generation, which includes standby, prime, base, peak, and co-generation
- About power factor and correction

#### Who Should Attend?

 Those facilities personnel who interface with facility electrical power systems, including project engineers, operation leads, instrumentation, controls personnel, and electrical engineers who are new to electrical power systems within oil and gas facilities.

### **Course Outline:**

- Fundamentals of Electrical
- Fundamentals of Electronics
- · insulation and conduction
- · Direct current, alternating current
- · Transformers power and instrument
- · Motors Induction and synchronous
- Power distribution
- · System protection and coordination
- Standby power systems
- Power generation
- Control Engineering
- · Variable speed drive principles

## **Training Methodology:**

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion

- Participatory ExerciseAction LearningClass Activities

- Case Studies
- Workshops
- Simulation

