

# ELECTRICAL COURSES

## POWER SYSTEM PROTECTION of ELECTRICAL NETWORK (E51AE)

### OBJECTIVE:

This course is designed to identify the different types of faults on the power system and the fault calculations and protection systems for motors, power transformers, bus bar, as well as testing and maintenance of protective relays.

### WHO SHOULD ATTEND?

This course is recommended for supervisors and engineers with basic experience in the field of protective relays.

### COURSE CONTENT:

- Introduction
- Fundamental of Power System Protection
- Faults, Causes, Effects and Calculations
- Instrument Transformers
- Overcurrent and Earth Fault Protection
- Transformer Protection
- Motor Protection Application
- Pilot Protection of Transmission Lines
- Bus bar protection

**Duration: 5 Days**

Date:	Venue:	Cost:
Feb 16 – 20	Dubai	SR8,000
Feb 23 – 27	Jubail	SR7,000
Jul 26 – 30	Sharm El-Shaikh	SR8,000
Nov 29 – Dec 3	Qatar	SR8,000

## POWER SYSTEM ANALYSIS (E67AE)

### OBJECTIVE:

This seminar will explain in detail the intention of operation and control of power systems. Also the different types of load forecast are introduced.

### WHO SHOULD ATTEND?

All electrical engineers are invited to attend this course. Operation, control, and planning engineers are strongly recommended to attend this course.

### COURSE CONTENT:

- Characteristics Influencing Generation and Transmission
- Nature of Transmission and Distribution Systems
- Forecasting T & D Load
- Overview of Economic Operation Functions
- Characteristics of Power Generating Units
- Formulation of the Economic Dispatch Problems
- Power Flow Studies
- Unit Commitment
- Optimal Preventive and Corrective Actions
- Fault Analysis
- Disturbances in Power System
- Electricity Deregulation
- Harmonics in Power Systems

**Duration: 5 Days**

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May 3 – 7	Jubail	SR7,000
Jul 5 – 9	Sharm El-Shaikh	SR8,000
Oct 18 – 22	Qatar	SR8,000