

# ELECTRICAL COURSES

## MOTOR PROTECTION (E34A)

**OBJECTIVE:**

This course is designed to provide the attendees with theoretical and practical details about the protection of A.C motor (induction and synchronous ) including, i fault types, abnormal operation, and mechanical failure.

**WHO SHOULD ATTEND?**

This course is recommended for electrical technicians and engineers who work in the protection or maintenance field and need more details about motor protection.

**COURSE CONTENT:**

- Introduction.
- Types of A.C. Motors
- A.C and D.C. Control Circuits.
- Protection Against Installing of Induction Motors.
- Protection Against Out of Step of Synchronous Motors.
- Stator Over Temperature Protection.
- Phase Over Current Protection.
- Negative Sequence Protection.
- Ground Fault Protection.
- Differential Protection.
- Under Voltage Effect and Protection.
- Rotor Protection

**PRACTICAL TASKS:**

- Testing of any relay available of the above.

**Duration: 5 Days**

Date:	Venue:	Cost:
Feb 23 – 27	Dammam	SR6,000
Aug 9 – 13	Dammam	SR6,000
Aug 30 – Sep 3	Abha	SR7,000

## MODERN CONTROLLER APPLICATIONS IN POWER SYSTEM (E97A)

**OBJECTIVE:**

This course explains in detail basic theoretical and well known concepts behind modern control technique in power systems.

**WHO SHOULD ATTEND?**

This course is intended for junior & senior electrical engineers of modern controller applications in power systems.

**COURSE CONTENT:**

- Introduction
- Basic Theoretical Concepts
- Types of Industrial Controllers
- Proportional Controller
- Adaptive Control Techniques
- Model Reference Adaptive Controller
- Fuzzy-Logic Controller
- Practical Application for Turbo-Generator Unit “Case Study”
- Practical Application for Maximum Power Extraction from Wind Turbine Energy Conversion System “Case Study”
- Practical Application for Direct Current Drive System “Case Study”

**Duration: 5 Days**

Date:	Venue:	Cost:
Apr 19 – 23	Dammam	SR6,000
May 17 – 21	Riyadh	SR7,000
Oct 25 – 29	Dammam	SR6,000