

# ELECTRICAL COURSES

## ADVANCED PROTECTIVE RELAYS (E69AE)

**OBJECTIVE:**

The course addresses the philosophy and technical tools of relay engineers. The different protective relaying schemes are introduced along with instrument transformers for relaying.

**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:**

- Introduction and General Philosophies
- Technical Tools of the Relay Engineer: Phasors, Polarity, and Symmetrical Components.
- Protection Against Transients and Surges
- Microprocessor Relaying
- System Grounding and Protective Relaying
- Generator Protection
- Motor Protection
- Transformer and Reactor Protection
- Station-Bus Protection
- Load Shedding and Frequency Relaying

**Duration: 5 Days**

Date:	Venue:	Cost:
<b>Jan 17 -21</b>	<b>Dammam</b>	<b>SR7,000</b>
<b>Aug 1 - 5</b>	<b>Dammam</b>	<b>SR7,000</b>
<b>Dec 19 -23</b>	<b>Riyadh</b>	<b>SR 8,000</b>

## ADVANCED PROTECTIVE RELAYS MAINTENANCE (E109AE)

**OBJECTIVE:**

Upon completion of this course the participant should be able to read relays schematics, maintain, test, calibrate complex electromechanical relays and analyze test results.

**WHO SHOULD ATTEND?**

Engineers

**COURSE CONTENT:**

- Electromechanical Relays
- Standard Testing of Relays Using Latest Relay Test Sets
- Internal and External Relay Schematics
- Theory and Application of Complex Relays
- Relays Calibrations
- Relay Test Results Analysis
- Corrective Actions.

**Duration: 5 Days**

Date:	Venue:	Cost:
<b>Mar 7-11</b>	<b>Dammam</b>	<b>SR7,000</b>
<b>Jul 4-8</b>	<b>Dammam</b>	<b>SR7,000</b>
<b>Dec 12-16</b>	<b>Jubail</b>	<b>SR 8,000</b>