

# INSTRUMENTATION & ELECTRONIC COURSES

## CONTROLLERS and CONTROL LOOPS (IE5B)

### OBJECTIVE:

This course has been designed to enhance the trainee's knowledge of the devices that control process variables and how several different types of instruments together make a unified control system.

### WHO SHOULD ATTEND?

Maintenance instrument technicians and foremen will find this course informative and beneficial.

### COURSE CONTENT:

#### Controllers and Tuning:

- Introduction to Controllers
- Types of Controllers and their Operation
- Controller Mode and Tuning
- Controller Features and Installation
- Testing and Maintaining Controllers

#### Test Controller Mode:

- Proportion
- Proportion + Integral
- Proportion + Derivative
- Proportion + Derivative + Integral

#### Control Loops:

- Fundamentals of Control Loops
- Control Loop Characteristics
- Cascade and Multivariable Systems
- Loop Dynamics
- Loop Protection

**Duration: 10 Days**

Date:	Venue:	Cost:
Jan 26 – Feb 6	Dammam	SR10,000
Aug 9 – 20	Dammam	SR10,000

## DCS/ICS OPERATION (IE14AE)

### OBJECTIVE:

This course provides the participants with full theoretical and practical details about DCS/ICS OPERATION through DCS software which including DCS / ICS Operation Troubleshooting in Electrical Systems and advantages of DCS .

### WHO SHOULD ATTEND?

This course is recommended for electrical operation and maintenance engineers, supervisors, and technicians who have experience DCS/ICS OPERATION and need more details of DCS wiring , software , A/D modules , and Applications .

### COURSE CONTENT:

- Distributed control system DCS
- DCS fundamentals
- DCS architecture& hardware system overview
- Field/DCS wiring diagram
- DCS software fundamentals
- Reports, alarm & event summary display
- Programmable logic controller
- PLC concepts
- Applications

**Duration: 5 Days**

Date:	Venue:	Cost:
Jan 26-30	Qatar	SR8,000
Apr 12-16	Jubail	SR7,000
Jun 28-Jul 2	Sharm El-Shaikh	SR8,000