

# INSTRUMENTATION & ELECTRONIC COURSES

## INTRODUCTION TO MICROPROCESSORS (IE39BE)

**OBJECTIVE:**

This 10 day training course aims to give participants a comprehensive introduction to microprocessor.

**WHO SHOULD ATTEND?**

Electronic and Industrial-Control Engineers and Electronic and Industrial-Control Technicians

**COURSE CONTENT:**

- Define Different Systems of Numbers; Binary, Decimal and Hexadecimal Numbers
- Explain Different Binary Codes, Binary Logic and Boolean Algebra and Logic Gates.
- Define Different Logic Families and their Characteristics
- Simplify Logic Functions using the Map Method
- Define Sequential Logic Systems, Flip-Flops, State Equation, State Reduction and Assignment
- Explain Operation of Counters, Registers, and Memory
- Mention the Basics of Microprocessors and Microcomputers; Arithmetic Logic Unit (ALU) Memory Unit, Input/Output Operation
- Mention the Basic Construction and Application of Microcontrollers.

**Duration: 10 Days**

Date:	Venue:	Cost:
Jan 10-21	Dammam	SR 12,000
Jul 18-29	Abha	SR 13,000
Nov 21-Dec 2	Dammam	SR 12,000

## IN TOUCH 10 FUNDAMENTALS (IE52A)

**OBJECTIVE:**

This course is designed to teach all data about Wonderware® visualization module & knowledge necessary to develop a human (HMI) using basic In Touch® HMI elements, features and functionality.

**WHO SHOULD ATTEND?**

Individuals who have little or no working experience with SCADA & HMI.

**COURSE CONTENT:**

- Introduction, System Requirements & Licensing
- Stand-Alone & IDE-Managed in Touch Applications
- Development Environment & Using WindowMaker
- Tagname Dictionary/Tags and Tag Features
- Animation
- Alarms
- InTouch QuickScripts
- Real-Time and Historical Trending
- I/O Communication
- Advanced Tag Functionality
- Security
- Application Backup

**PRACTICAL TASK:**

- Verification for Different Sensor
- Setting Adjustment for Different Switches
- Calibration for Different Transmitters

**Duration: 5 Days**

Date:	Venue:	Cost:
Feb 7-11	Dammam	SR 8,000
Jun 14-18	Cairo	SR 10,000
Sept 26-30	Dammam	SR 8,000