

**ADVANCED DIPLOMA IN INDUSTRIAL AUTOMATION**  
**DURATION - 90 DAYS**

**contact:9640648777**

**Module 1: (Field Instrumentation)**

- ✓ Basic block of instrumentation system types of transducers (active and passive)
- ✓ Temperature measurement, working principle, types, and selection guidelines.
- ✓ Pressure measurement, working principle, types, and selection guidelines.
- ✓ Flow measurement, working principle, types, and selection guidelines.
- ✓ Level measurement, working principle, types, and selection guidelines.
- ✓ Displacement measurement, working principle, types, and selection guidelines.
- ✓ Angular displacement and speed measurement, working principle, types, and selection guidelines.
- ✓ Current to pressure converter

**Module 2: (General PLC)**

Components of plc

- ✓ Power supply module
- ✓ CPU
- ✓ Input and output Module
- ✓ Bus system
- ✓ Communication system

Block Diagram of PLC

Source and sink concept

Features of plc

Need & Advantages of PLC

Introduction to Number System

Types of Programming language

Uploading and Downloading Program

**Module 3 (PLC Programming)**

Introduction to PLC programming Software

Addressing Concept

Introduction to BIT, BYTE & WORD concept

Programming Instructions Arithmetic and logic

- ✓ Load/read/or/out
- ✓ Move Block Application
- ✓ Compare/Add/sub
- ✓ Advanced Instructions

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- ✓ Leading & trailing edge instructions
- ✓ File Handling
- ✓ Timer & counter Blocks Programming
- ✓ Master Control/set/reset function

Monitoring of Programs

Forcing I/P & O/P

Troubleshooting and fault Diagnostics of PLC

Documenting the project

**Module 4: (DCS)**

Introduction of DCS system

Architecture of DCS System

Hardware of DCS

Types of I/O

Comparison between PLC & DCS

Need of DCS

Applications of DCS

Block Diagram of DCS

**Module 5: (VFD)**

Introduction to VFD

Importance of VFD

VFD selection

Parameter Programming

Applications

**Module 6 (SCADA)**

Introduction to SCADA

Applications of SCADA

Difference between SCADA and HMI

Different packages available with I/O structure

Features of SCADA

Creating new SCADA Application

Creating Database of Tags

Creating & Editing Graphical display with animation

Trends

- ✓ Real-time trends

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- ✓ Historical trends

Creating Alarms

Writing the Logic through Scripts

Connectivity with different Hardware

- ✓ Communication with PLC
- ✓ Communication protocols

Connectivity between software

- ✓ Communication with EXCEL

