DCS and Panel Designing Training
COURSE CONTENT

About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

DCS (Distributed Control System) and Panel Designing Training offered by Multisoft Systems is a comprehensive program designed for aspiring engineers, technical professionals, and system operators who wish to master the art of managing and designing control systems and panels used in industrial, manufacturing, and process control environments. This training delves deep into the core concepts of DCS, which is an automated control system that supervises and manages a process or a system spread across various locations in a plant or facility.

Module 1: Introduction

1. Introduction to Automation

- ✓ Brief Description of a Control System
- ✓ Micro Controller, PID Controller, PLC Controller
- ✓ History & Need of Industrial Automation
- ✓ Application of Industrial Automation
- ✓ Basic Components of Automation
- ✓ Hardware Classification of Automation

Module 2: Distributed Control Systems (DCS)

1. Introduction to control system

- ✓ Applications of DCS system
- ✓ Architectural evolution for DCS
- ✓ Hardware architecture of DCS

  - o Processor
  - o Power supply
  - o I/O modules
  - o Communication bus
  - o Operator and Engineering station
  - o Redundancy
- ✓ Comparison between the hardware PLC & DCS

Module 3: VFD & Control Panel Designing

1. Motion Control System

- ✓ AC Motor and its working
- ✓ Introduction to Stepper and Servo motor
- ✓ Motor control circuit, interlocking circuit

- ✓ Introduction to AC Drives & application
- ✓ Drive Parameter programming
- ✓ VFD controlling through Keypad, External switch and PLC
- ✓ Basic Criteria for drives selection
- ✓ Drive Control Panel system designing

2. AutoCAD Designing

- ✓ Creating and managing workspace.
- ✓ Erasing Object, Cancelling & Undoing a command
- ✓ Object selection method
- ✓ Drawing line and circle
- ✓ Drawing arc, rectangle, ellipses and polygon
- ✓ Edit, Move, copy & paste command
- ✓ Offset, rotate & scale, fillet, Chamfering, trim, Extend Stretch & lengthen command
- ✓ Arraying, Mirroring, Breaking, dividing & joining
- ✓ Zooming, Panning & drawing
- ✓ Electrical Wiring Designing through AutoCAD
- ✓ Control panel designing through AutoCAD

3. Control Panel Designing

- ✓ Type of Switches: - PB, E- PB, Toggle Switches, Selector switches, Limit Switches
- ✓ Introduction to Contactor and it's working
- ✓ Miniature Circuit Breaker
- ✓ Molded Case Circuit Breaker
- ✓ Over Load Relay
- ✓ Motor Protection Circuit Breaker
- ✓ Basic of Control & power drawing
- ✓ General wiring guidelines in a panel Designing
- ✓ Panel Indicator (Multifunction meter, ammeter, Voltmeter)
- ✓ Preparation of general arrangement diagrams, busbar sizing
- ✓ Electrical Protection

- ✓ General wiring guidelines / practices
- ✓ Load management (connected load, running load, load factor)
- ✓ Maintenance & troubleshooting of control circuit in live panels