

Emerson Ovation DCS Fundamentals

COURSE CONTENT

GET IN TOUCH



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About Multisoft

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About Course

Emerson Ovation DCS Fundamentals Training is designed to provide engineers, operators, technicians, and automation professionals with a solid understanding of Emerson Ovation Distributed Control System (DCS). The course introduces DCS architecture, hardware components, operator interface, controllers, process monitoring, alarms, historian, communication networks, and basic maintenance concepts. Through practical demonstrations and industrial examples, participants develop the foundational knowledge required to operate and support Emerson Ovation DCS environments.

Module 1: Introduction to Emerson Ovation DCS

- ✓ Fundamentals of Distributed Control Systems
- ✓ Evolution of Process Automation
- ✓ Emerson Ovation Overview
- ✓ Industrial Applications
- ✓ Benefits of DCS
- ✓ System Components
- ✓ Overview of Plant Operations

Module 2: Ovation System Architecture

- ✓ Hardware Architecture
- ✓ Controllers
- ✓ Input and Output (I/O) Modules
- ✓ Servers and Workstations
- ✓ Network Infrastructure
- ✓ System Redundancy
- ✓ System Communication Flow
- ✓ High Availability Concepts

Module 3: Human Machine Interface (HMI)

- ✓ Operator Workstation
- ✓ Process Graphics
- ✓ Navigation Techniques
- ✓ Trend Displays

- ✓ Alarm Displays
- ✓ Process Monitoring
- ✓ Operator Commands
- ✓ Display Management

Module 4: Process Control Fundamentals

- ✓ Process Variables
- ✓ Control Loops
- ✓ PID Control Basics
- ✓ Automatic and Manual Modes
- ✓ Process Monitoring
- ✓ Control Strategies
- ✓ Plant Operation Concepts
- ✓ Operational Best Practices

Module 5: Alarm Management and Event Handling

- ✓ Alarm Fundamentals
- ✓ Alarm Classification
- ✓ Alarm Prioritization
- ✓ Alarm Acknowledgement
- ✓ Event Logging
- ✓ Historical Event Review
- ✓ Operator Response Procedures
- ✓ Alarm Management Best Practices

Module 6: Engineering Fundamentals

- ✓ Engineering Workstation
- ✓ Point Database Concepts
- ✓ Tag Management
- ✓ Configuration Overview
- ✓ Graphics Management
- ✓ Database Maintenance
- ✓ Documentation Standards
- ✓ Engineering Workflow

Module 7: System Administration and Maintenance

- ✓ User Management
- ✓ Roles and Permissions
- ✓ Security Basics
- ✓ Backup and Restore
- ✓ System Diagnostics
- ✓ Preventive Maintenance
- ✓ System Health Monitoring
- ✓ Routine Administrative Tasks

Module 8: Communication and System Integration

- ✓ Industrial Communication Fundamentals
- ✓ OPC Concepts
- ✓ Historian Integration

- ✓ Third-Party Connectivity
- ✓ Data Exchange
- ✓ Enterprise Integration
- ✓ Communication Best Practices

Module 9: Practical Plant Operations and Troubleshooting

- ✓ Plant Startup Concepts
- ✓ Normal Plant Operations
- ✓ Shutdown Procedures
- ✓ Basic Troubleshooting
- ✓ Fault Identification
- ✓ Operator Best Practices
- ✓ Operational Safety
- ✓ Real-World Plant Scenarios
- ✓ Course Review and Knowledge Assessment