

Emerson DeltaV Configuration & Engineering

COURSE CONTENT

GET IN TOUCH



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About Multisoft

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About Course

Emerson DeltaV Configuration & Engineering Training provides practical knowledge for configuring, engineering, and maintaining Emerson DeltaV Distributed Control Systems. The course covers system architecture, control module engineering, HMI development, alarm management, historian configuration, industrial communication, commissioning, system administration, and project implementation. Through practical exercises and real-world industrial scenarios, participants gain the skills required to successfully engineer and support DeltaV automation systems.

Module 1: Introduction to Emerson DeltaV DCS

- ✓ Distributed Control System Fundamentals
- ✓ Emerson DeltaV Overview
- ✓ DeltaV Architecture
- ✓ Process Automation Concepts
- ✓ Industry Applications
- ✓ Engineering Workflow
- ✓ DeltaV Software Components

Module 2: DeltaV Hardware and Network Configuration

- ✓ Controllers
- ✓ I/O Cards
- ✓ CHARMs Technology
- ✓ Workstations
- ✓ Servers
- ✓ Network Architecture
- ✓ Redundancy Configuration
- ✓ Hardware Installation Concepts

Module 3: DeltaV Explorer and System Administration

- ✓ DeltaV Explorer Navigation
- ✓ System Hierarchy
- ✓ Database Configuration
- ✓ Plant Areas

- ✓ User Configuration
- ✓ System Administration
- ✓ Engineering Database Management
- ✓ Project Organization

Module 4: Control Modules and Control Strategies

- ✓ Control Modules
- ✓ Function Blocks
- ✓ Analog Control
- ✓ Digital Control
- ✓ PID Configuration
- ✓ Interlocks
- ✓ Sequential Logic
- ✓ Advanced Control Strategies

Module 5: Equipment Modules and Phase Logic

- ✓ Equipment Modules
- ✓ Unit Structure
- ✓ Phase Logic
- ✓ Equipment Configuration
- ✓ State Management
- ✓ Operational Sequences
- ✓ Reusable Module Design
- ✓ Best Practices

Module 6: Graphics, HMI, and Operator Interface

- ✓ DeltaV Operate
- ✓ Graphics Development
- ✓ Dynamos
- ✓ Faceplates
- ✓ Process Displays
- ✓ Navigation
- ✓ Operator Workstations
- ✓ HMI Best Practices

Module 7: Alarm Management, Event Chronicle, and Historian

- ✓ Alarm Configuration
- ✓ Alarm Priorities
- ✓ Alarm Suppression
- ✓ Event Chronicle
- ✓ Continuous Historian
- ✓ Trend Configuration
- ✓ Historical Data Analysis
- ✓ Alarm Optimization

Module 8: Batch Configuration Fundamentals

- ✓ Batch Concepts
- ✓ Batch Executive

- ✓ Recipe Management
- ✓ Unit Procedures
- ✓ Operations
- ✓ Phases
- ✓ Batch Execution
- ✓ Batch Monitoring

Module 9: Security and System Administration

- ✓ User Management
- ✓ Roles and Permissions
- ✓ Security Policies
- ✓ Audit Trail
- ✓ Authentication
- ✓ Authorization
- ✓ Backup Configuration
- ✓ System Integrity

Module 10: Diagnostics, Maintenance, and Troubleshooting

- ✓ System Diagnostics
- ✓ Controller Diagnostics
- ✓ Network Diagnostics
- ✓ Error Identification
- ✓ Preventive Maintenance
- ✓ Backup and Restore
- ✓ Performance Monitoring

- ✓ Troubleshooting Best Practices

Module 11: Integration with Field Devices and Enterprise Systems

- ✓ OPC Communication
- ✓ PLC Integration
- ✓ HART Devices
- ✓ FOUNDATION Fieldbus
- ✓ Modbus Integration
- ✓ Third-Party Interfaces
- ✓ Enterprise Connectivity
- ✓ Integration Best Practices

Module 12: Commissioning, Validation, and Performance Optimization

- ✓ Factory Acceptance Test (FAT)
- ✓ Site Acceptance Test (SAT)
- ✓ Loop Checking
- ✓ Commissioning Activities
- ✓ Validation Procedures
- ✓ Performance Tuning
- ✓ System Optimization
- ✓ Operational Best Practices

Module 13: End-to-End Emerson DeltaV Engineering Project

- ✓ Project Planning
- ✓ Hardware Configuration
- ✓ Controller Engineering
- ✓ Control Strategy Development
- ✓ Graphics Configuration
- ✓ Alarm Setup
- ✓ Historian Configuration
- ✓ System Integration
- ✓ Commissioning
- ✓ Final Industrial Automation Project