



Educational Services 2016 Course Catalog

PSS China



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DeltaV Implementation I

7009

This course is designed for process & process control engineers responsible for obtaining key production data, maintaining, configuring and troubleshooting a DeltaV system.

Overview

During the 9-1/2 day course, the student will be able to define system capabilities, define nodes, configure continuous and sequential control strategies, create process alarms, operate the system, troubleshoot the system and modify operator displays.

Prerequisites

Microsoft Windows experience. Prospective attendees new to DeltaV should first attend DeltaV Hardware & Troubleshooting, Course 7018.

Topics

- System Overview
- DeltaV Diagnostics
- Control Studio
- Motor Control with Interlocking and Permissive Conditions
- Cascade Control
- DeltaV Operate
- Alarms & Process History View
- Sequential Function Charts
- Electronic Marshalling (CHARMS)
- DeltaV Explorer
- Control Modules
- Regulatory Control
- System Operation
- Alarm Help
- Configure Theme Dynamos



DeltaV Operator Interface for Continuous Control

7012

This course is for operators, supervisors and managers responsible for the operation of continuous processes using DeltaV system.

Overview

This 4-day course uses lectures and hands-on workshops to provide an in-depth overview on operating the DeltaV System. Students who complete this course will:

- access operator displays
- manipulate various control module operating parameters to operate the process
- respond to process alarms
- monitor process performance
- view real-time and historical trend data

Topics

- System Overview
- Accessing DeltaV Operate Window, Menus Displays and Directories
- Discrete and Analog Control Module Operation
- Accessing Alarm Displays/Alarm Handling
- Motor Control Module Operation
- Regulatory/Cascade Control Module Operation
- Accessing Real-time/Historical Trend Data
- Unit Alarms
- Sequential Function Chart Operation
- Phase Logic Modules



DeltaV Operator Interface - Batch

7014

This course is for operators, supervisors, and managers responsible for the operation of batch processes using DeltaV system.

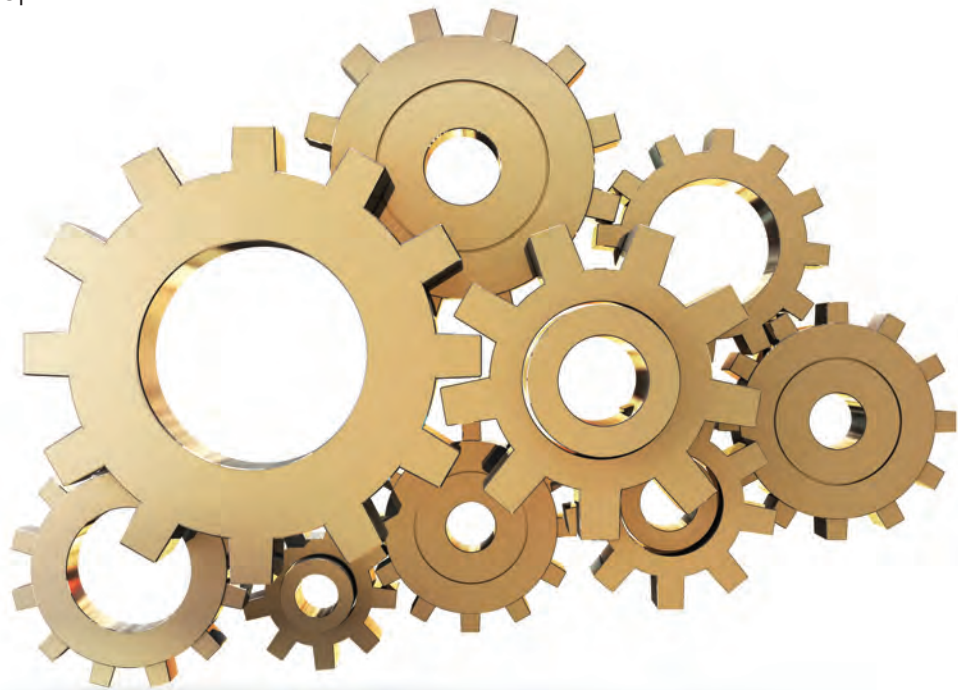
Overview

This 4-1/2 day course uses lectures and hands-on workshops to provide an in-depth overview on operating the DeltaV System. It includes all content in course 7012 plus students will:

- understand basic batch terminology
- manipulate Unit Module parameters
- access the Batch Operator Interface
- run procedures

Topics

- System Overview
- Accessing DeltaV Operate
- Window, Menu Displays and Directories
- Discrete, Analog, Regulatory and Cascade Control Module Operation
- Motor Control Module Operation
- Accessing Alarm Displays/Alarm Handling
- Accessing Real-time/Historical Trend Data
- Accessing Process History View
- Sequential Function Chart Operation
- Phase and Recipe Controls
- Batch Operator Interface



DeltaV Systems Batch Implementation

7016

This course is designed for individuals responsible for configuring and commissioning DeltaV Batch software.

Overview

This 4-1/2 day course covers the implementation of a complete batch application. A process simulator will provide a batch application. Students will use DeltaV Batch software to configure recipe entities including, Aliasing, Equipment Trains, Dynamic Unit Allocation, Phase Logic, Operations and Unit Procedures. Equipment entities will also be configured including, Units modules and Process cells.

Prerequisites

Course 7009, DeltaV Implementation I

Topics

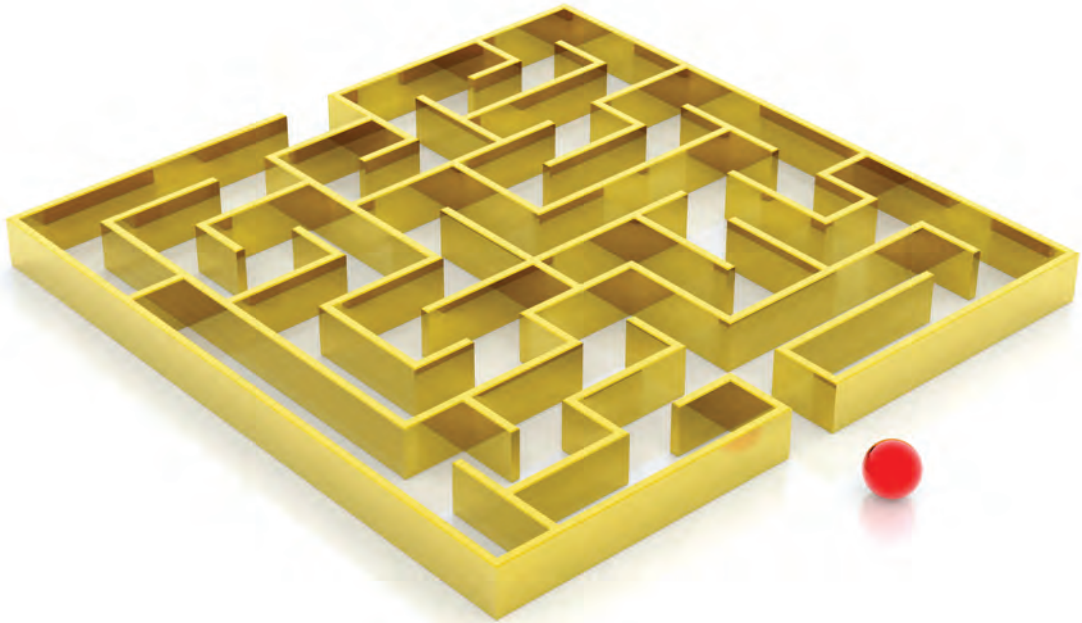
- Batch Overview
- Alias Definition
- Process Cell
- Class Based Equipment Modules
- Unit Procedure
- Equipment Trains
- Dynamic Unit Allocation
- Unit Phase
- Unit Module
- Class Based Control Modules
- Operation
- Procedure
- Unit Aliasing



DeltaV Implementation II

7017

This course is for process control engineers responsible for designing, implementing and testing configuration using the DeltaV system.



Overview

During the 4-1/2 day course, the student will be able to identify function block structures, interpret function block status values, design error masking, define nodes, configure modules using State-Driven & Command-Driven algorithms, configure modules with Analog Control Palette Blocks and create simulation for testing purposes.

Prerequisites

DeltaV Implementation I, Course 7009

Topics

- Function Block Structures & Status Values
- Analog Control Palette Blocks – Bias/Gain, Deadtime, Limit, Ratio, Signal Characterizer, Splitter
- HART Inputs and Outputs
- HART Device Alarms
- AMS Intelligent Device Manager
- Unit Alarms
- DeltaV Tune with InSight
- Device Control Options
- Class Based Control Modules

DeltaV Hardware and Troubleshooting

7018

This course is recommended for instrumentation and maintenance technicians, managers, and configuration engineers who need to know about DeltaV hardware. It provides an overview of the DeltaV Control Network, M- and S-series hardware, and software applications. Upon completion, you will be familiar with the hardware and be able to perform troubleshooting techniques.

Overview

This 4-1/2 day course focuses on the hardware components that make up the DeltaV system: M-series controllers and I/O, S-series controllers and I/O (including CHARMs), and DeltaV Smart Switches. Using a combination of lectures and workshops, you will learn how to use operator and diagnostic tools to identify and locate hardware-related fault conditions. Workshops provide the opportunity to disassemble and reassemble the M- and S-series hardware and return the system to an operating state.

If your systems include bus technologies such as Foundation Fieldbus, we recommend courses 7032, or 7037.

Prerequisites

Windows experience.

Topics

- DeltaV Overview
- DeltaV Diagnostics
- DeltaV I/O Cards and Carriers
- Electronic Marshalling (CHARMs)
- DeltaV and AMS Suite: Intelligent Device Manager
- Redundant I/O
- Operator Alarms
- DeltaV Smart Switches
- Controllers and Power Supplies
- HART I/O



DeltaV Systems Administration Windows 7 and Server 2008

7027

Overview

This 4-1/2 day course is designed for control system administrators, process control engineers and IT specialist responsible for managing, installing, and commissioning a DeltaV system running on the Windows 7 operating system and Windows Server 2008.

Prerequisites

Highly Recommended Course 7009, DeltaV Implementation I, or Course 7018, DeltaV Hardware and Troubleshooting

Topics

- Overview/Review of System Components and Topologies
- DeltaV Licenses
- User Administration
- Auto Update Service
- Cybersecurity tools – Smart Firewall, Controller Firewall, Smart Switches
- Installation Checklist of the Windows 7 and Windows Server 2008 Operating Systems
- Installation of the DeltaV Software and AMS Device Manager Components
- DeltaV Control Networks and Remote Access
- DeltaV Domains and Workgroups
- Upgrading Hardware and Software
- Importing/Exporting
- Database Administration
- Network Node Diagnostics
- Network Security
- Backup and Restore Procedures
- DeltaV Zones



DeltaV Safety Instrumented System with Electronic Marshalling Maintenance

7304

This course is for Electrical & Instrument technicians, maintenance technicians, E&I reliability engineers and other personnel responsible for maintaining DeltaV SIS with Electronic Marshalling.

Overview

This 3-day hands-on instructor led course covers the architecture of the DeltaV SIS with Electronic Marshalling including Rosemount SIS instruments and Fisher SIS Digital Valve Controllers. Students will be able to identify the DeltaV SIS with Electronic Marshalling hardware and software components.

Students will be able to configure Partial Stroke Test using DeltaV SIS with Electronic Marshalling. Students will practice troubleshooting and maintenance techniques with DeltaV SIS simulators throughout the course.

Prerequisites

Course 7018, DeltaV Hardware and Troubleshooting, is a requirement.

Topics

- Safety Lifecycle
- DeltaV SIS Overview
- DeltaV SIS with Electronic Marshalling Hardware architecture Including Power Requirements
- Commissioning and Downloading the DeltaV SIS with Electronic Marshalling components
- Safety Instrumented Functions
- Rosemount SIS Instruments
- AMS Device Manager
- Fisher SIS Digital Valve Controller
- DeltaV Diagnostics
- Partial Stroke Test using DeltaV SIS with Electronic Marshalling



DeltaV SIS Implementation

7305

This course is for personnel who design, implement, commission and service DeltaV SIS.



Overview

This 4-1/2 day course is a hands-on instructor led course. The course covers complete DeltaV SIS Implementation including hardware and software architecture. Students will be able to design a DeltaV SIS Network and Safety Instrumented Functions (SIFs). Additionally, students will be able to configure smart SIS instruments and their associated alerts, including partial stroke testing.

Prerequisites

Course 7009 is a requirement. Recommend IEC 61511 knowledge.

Topics

- DeltaV SIS Overview
- DeltaV SIS SLS 1508 Hardware architecture
- DeltaV SIS with Electronic Marshalling Hardware architecture
- DeltaV Safety Instrumented Functions
- Rosemount SIS Instruments Security
- AMS Device Manager relating to DeltaV SIS
- DeltaV SIS Fisher SIS Digital Valve Controllers
- SISNet Repeaters
- DeltaV SIS Security



AMS Device Manager

7020



Overview

Completing 3-days of AMS Device Manager hands-on instructor assisted training modules and exercises, provides the quickest route to your productive use of this predictive maintenance application. The training exercises focus on skills required by engineers and technicians, and are based on real-world tasks that most users will encounter on the job.

7020-1 Configuring and Using AMS Device Manager

- Viewing and Modifying Devices
- Creating a Plant Database Hierarchy and Adding Devices
- Using the Field Communicator with AMS Device Manager
- Using the AMS Device Manager Browser Functions
- Audit Trail
- Calibrating Device - Calibration Assistant
- Configuring and Monitoring System Alerts

7020-2 System Administration

- AMS Device Manager System Overview
- Installing an AMS Device Manager Server Plus Standalone
- Starting AMS Device Manager for the First Time
- Network Communication Interface Setup
- AMS Device Manager Database Management
- Installing a Distributed System
- Installing Device Types from Media

7020-3 SNAP-ON™ Applications

- AMS ValveLink® SNAP-ON Application - Basics
- MV Engineering Assistant SNAP-ON Application
- QuickCheck™ SNAP-ON Application
- AMS Device Manager OPC Server and the Matrikon OPC Explorer
- AMS Device Manager Web Services
- AlertTrack™ SNAP-ON Application
- Wireless SNAP-ON Application



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Nov 2015

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