Maximise your Investment with Well-Trained Personnel
Exceed Expectations with Skilled Personnel

Skilled personnel anticipate needs; they solve tough problems; they make an operation run smoothly. That’s why training is the cornerstone of maximum availability, sustainability, and operational excellence at your facility.

A well-trained team knows their tools and knows how to use them to meet short-term and long-term goals. Work with a partner — Emerson Educational Services can bring your entire team the expertise they need to face each challenge.

Whether your team must configure and calibrate valves, predict machinery faults, or develop a control strategy, Emerson Educational Services has the coursework to prepare your team. Investing in your team will also:

- Train and keep high-quality team members. What if you train personnel and they leave? Worse yet, what if you don’t train them and they stay? Train personnel and improve not only operations, but a sense of ownership in the operation’s results — a proven ingredient in employee satisfaction and retention.

- Learn best practices to meet profitability Goals. Emerson instructors reach deep into their decades of product experience and industry best practices. Profit from their experience to meet your business goals.

- Choose hands-on learning and train for real-life challenges. Emerson instructors combine hands-on training with real-life examples to prepare your personnel to find solutions in the midst of challenging situations.

Sources of Skill Shortages

- Fewer Incoming Workers
- Retiring Workforce
- Fewer Specialists
- Inexperienced Workers
- More Technology

“32% of O & G industry survey respondents said skills shortage was among the largest threats particularly in subsea and LNG operations where the shortage is felt in terms of project costs and delays. This threat rated second only to economic instability at 34%.”

Oil and Gas Workforce Report Published by oilcareers.com and Air Enreri, March 2013
Train and Keep High-Quality Team Members

Consider Emerson training as the effective short- and long-term solution to maximize the return on your most significant investment: your employees.

Through Emerson coursework, employees obtain the knowledge they need to not only perform their jobs, but seek efficient solutions to daily issues. They will perform with a real sense of ownership and satisfaction — resulting in increased retention.

Whether you choose individual classes or a complete education program designed specifically for your organization, Emerson can be your single expert training source and offer flexibility to work within your schedules and shifts.

Your facility will benefit from these options:
- Accelerated boot camp developed for your new recruits.
- Assessments for skill gap analysis specific to your facility.
- Efficiently delivered blended learning approach.

Competency Development Program

To create a competency development program, Emerson follows a proven process that starts with Educational Services consultants leading your management team to identify items such as job role definitions and skills gap analysis. We will also guide the team to discuss methods of assessing the training success.

“...the training exceeded my expectations. I wanted information on sizing control valves and I got that plus much other useful information.”
- Operations/Production Worker in the Oil and Gas Industry

eu.education@emerson.com
www.EmersonProcessCourseAdvisor.com
DeltaV Implementation I

Course 7009
This 4-1/2 day course covers a complete DeltaV system implementation. Upon completion of this course the student will be able to define system capabilities, define nodes, configure continuous and sequential control strategies, operate the system and define users and security.

Prerequisites
Windows experience. It is recommended that prospective attendees new to process control systems attend Course 7101 or Course 7018.

Topics
• System Overview
• Explorer
• Control Modules
• Control Studio
• Motor Control
• Regulatory Control
• WorkSpace
• System Operation
• Alarms & Process History View
• Sequential Function Charts
• Phase Logic
• Security
• Alarm Help
• Electronic Marshalling (CHARMS)

DeltaV Systems Batch Implementation

Course 7016
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
• Unit Phase
• Alias Definition
• Unit Module
• Process Cell
• Class Based Control Modules
• Class Based Equipment Modules
• Operation
• Unit Procedure
• Procedure
• Equipment Trains
• Unit Aliasing
• Dynamic Unit Allocation

DeltaV Implementation II

Course 7017
This 4-1/2 day course is for process control engineers responsible for configuring the DeltaV system. Advanced topics will be covered including displays, function blocks, and configuration tips.

Prerequisites
Course 7009, DeltaV Implementation I

Topics
• Function Block Structure
• HART Inputs and Outputs
• Analog Control Blocks
• DeltaV Tune with InSight
• Device Control Options
• Class Based Control Modules
• Expressions
• Unit Alarms
• Multi-Dimensional (Array Parameter)
• Equipment Modules
• Display Environment
• Custom Faceplates
• Custom Dynamos
• HART Device Alarms

DeltaV Hardware and Troubleshooting

Course 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.

Prerequisites
Course 7009, DeltaV Implementation I

Topics
• Visual Basic Primer
• Forms
• Modules
• Schedules
• User Preferences
• Picture Sizing
• Environment Customization
• Custom Faceplates
• Function Block Faceplates
• FRS Functions
• Pop Up Menus
• Color Threshold Tables
• Custom Dynamos
• Tag Groups
• Key Macro Editor
• Theme Dynamos

DeltaV Advanced Graphics

Course 7025
This 4-1/2 day course is for process control engineers responsible for configuring advanced functionality in the DeltaV user interface. This course expands on graphic topics covered in both the DeltaV Implementation, course 7009 and DeltaV Implementation II, course 7017.

Prerequisites
Course 7009, DeltaV Implementation I

Topics
• Overview/Review of System Components and Topologies
• Installation Checklist of the Windows 7 and Windows Server 2008 Operating Systems
• Installation of the DeltaV Software Components
• DeltaV Control Networks and Remote Access
• DeltaV Domains and Workgroups
• User Administration and Network Security
• Upgrading Hardware and Software
• Backup and Restore Procedures
• Importing/Exporting
• DeltaV Zones

DeltaV Systems Administration for Windows 7 and Server 2008

Course 7027
This 4-1/2 day course is designed for system engineers and administrators responsible for installing, commissioning, and managing 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
• Installation Checklist of the Windows 7 and Windows Server 2008 Operating Systems
• Installation of the DeltaV Software Components
• DeltaV Control Networks and Remote Access
• DeltaV Domains and Workgroups
• User Administration and Network Security
• Upgrading Hardware and Software
• Backup and Restore Procedures
• Importing/Exporting
• DeltaV Zones
Fieldbus Systems and Devices

Course 7032
This course is for individuals responsible for installing, troubleshooting, calibrating and configuring FOUNDATION™ fieldbus instruments and control strategies using the Delta V scaleable systems.

Overview
This 4-day lecture/lab provides maximum hands-on experience working with the integration of FOUNDATION™ fieldbus devices and the DeltaV scaleable system. The student will be able to install fieldbus instruments and segment checkout for the correct operation of the physical layer. The student will be able to use the DeltaV system to perform AMS Device Manager methods such as calibration, setup wizards, zero trim and diagnostics. The student will be able to implement a pressure loop using FOUNDATION™ fieldbus function blocks with the DeltaV Control Studio application. The student will configure PlantWeb Alerts and device alarm parameters.

Prerequisites
Course 7009 or Course 7018. The 375 Field Communicator and ValveLink for Fieldbus will be demonstrated and available for students as optional activities.

Topics
• FOUNDATION™ fieldbus Overview
• Macro Cycle Execution
• Fieldbus Function Blocks
• Control Strategy Configuration
• Control Anywhere
• FieldVue Theory of Operation
• Transmitter Theory of Operation
• AMS Device Manager Methods
• Fieldbus Wiring Practices
• System Troubleshooting
• Configuring Fieldbus Device
• Alarms and PlantWeb Alerts
• Configuring a Fieldbus Operator Display
• Segment Checkout Procedures

NEW: AMS Device Manager with DeltaV

Course 7039 CEUs: 3.2

Overview
This 4-1/2 day course is for instrumentation technicians responsible for all areas of managing and ensuring the reliability of instrumentation in the plant process including startup and commissioning, normal operations, maintenance, and troubleshooting.

Prerequisites
The purchase of this course also includes access to the e7020 course prerequisite, at no extra charge and upon confirmed enrollment, the student will receive access to the e7020 online course (via e-mail) to take as a prerequisite prior to attending the instructor led course. Microsoft windows experience.

Prospective attendees should first complete the eLearning e7020 AMS Device Manager Suite Primer.

Topics
• Topics
  • DeltaV and PlantWeb Overview
  • AMS Device Manager Overview
  • Foundation Fieldbus Overview
  • ValveLink SNAP-ON Introduction
  • HART Overview
  • PROCONEX QuickCheck SNAP-ON
  • PROFIBUS Overview
  • PlantWeb Alerts
  • AMS Device Manager User Interface
  • AMS Device Manager Help
  • AMS Device Manager Plant Location Hierarchy
  • AMS Device Manager Browser
  • Monitoring System Alerts with AMS Device Manager
  • PROCONEX AlertTrack SNAP-ON
  • Device Replacement for HART, Fieldbus, and PROFIBUS Devices
  • AMS Device Manager Audit Trail
  • ValveLink SNAP-ON Tests and Diagnostics
  • AMS Device Manager Calibration Assistant

Wireless Self Organising Network

This course is intended for technicians, engineers and other plant personnel who need to know how to design, install, setup, configure, maintain, troubleshoot Wireless Self Organising Networks and their components.

Overview
This 2 day course explains how Self Organising Wireless Networks function and how they are installed, setup, configured and integrated. It emphasizes planning, proper installation and startup, configuration, maintenance, and integration. The course uses lectures and labs to maximise the hands on experience and teach the students. Students who complete this course will:
• correctly install and setup the 1420 Wireless Gateway
• properly install and configure Wireless Transmitters
• properly integrate Host interfaces to the Wireless Gateway

Prerequisites
Some experience in Networks and Host integration would be helpful.

Topics
• How Self Organising Networks Function
• Self Organising Networks Best Practices
• Network Components
• 1420 Installation and Setup
• Network Parameters
• 648 and 3051S Wireless Transmitters Installation, Configuration, Maintenance and Calibration
• Using AMS Device Manager with the 1420 Wireless gateway
• Configuring Wireless Devices with AMS Device Manager
• Operation of AMS Wireless Snap-On
• Modbus Serial Integration
• Modbus TCP Integration
Learn Best Practices to Meet Profitability Goals

Your personnel want to perform high-quality work that shows positive results. Learning best practices, your personnel will avoid inadvertent operator errors and improper maintenance that lead to energy waste, contamination, unplanned shutdowns, and off-spec product.

"The material was good. I needed the review of the PID, the instructor explained it in a way that really helped me to understand it much better that I previously did."

Maintenance Worker in the Refining Industry

With world-class training, your personnel will apply best practices to Emerson products and applications throughout your facility.

MAXIMISE
- Plant Automation Benefits

DISCOVER
- Performance Improvements & Cost Reductions

MANAGE
- Change & New Technology

Learning Partner providing best practices not just products

COMPLY
- with Government Regulations

GROW
- Skills in Diverse Cultures to Drive Results

Increased Productivity
Emerson instructors’ application expertise and practical field experience dramatically boost students’ skills and performance. And evergreen training keeps your people up to date on the latest technologies, enabling them to uncover new process improvements.

Broad Emerson Offerings
In developing courses and education paths, we draw from multiple disciplines: control, measurement, regulation, and automation. In this way your personnel will get the most from the Emerson products and applications at work in your operations.

"The training our operators received was second to none. The real-life exercises put our operators at the top of their game and helped make this one of the best startups I’ve ever seen. We finished a day early with no injuries or environmental incidents."

Operations Manager in the Refining Industry

IACET Authorized Provider
Emerson Educational Services has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). Students enjoy a consistent high-quality class experience.
Micro Motion, the pioneer in Coriolis technology and the world’s leading producer of mass flow and density meters, offers classes at our factory, regional locations, or at your plant. Rosemount’s leadership in the design, manufacture, and application of smart field instrumentation is unchallenged for pressure, level, temperature, and flow measurement instruments to monitor and control processes.

### Micro Motion Coriolis Technician

**Course 2359**

This 2-day course is specifically designed for your technicians and engineers who are involved in the installation, commissioning, maintenance or use of Micro Motion mass flow meters. The course can be delivered in the following languages: English, German, French or Dutch.

**Prerequisites**

Flow Knowledge of basic flow fundamentals.

**Topics**

- Micro Motion product overview
- Coriolis principle of operation
- Sensor installation and start-up
- Zero calibration, simulation and outputs trimming
- Transmitters’ configuration and Basic troubleshooting

### 8700 Series Smart Magnetic Flowmeter

**Course 2340**

This 1-day course uses lectures and labs to teach the student how to install, configure, calibrate, and maintain the Rosemount Smart Flowmeter System composed of the Model 8712 Smart Flowmeter Transmitter and the 8705 Flanged or 8711 Wafer Flow tube. The students will also learn the operation and interface capabilities of the Local Operator Interface, Field Communicator or AMS. Upon completion of course students will:

- explain the differences and capabilities of the Rosemount Magnetic Flowmeters
- identify transmitter parts/explain functionality
- explain Faraday’s Law and the principles of operation of Magnetic Flowmeter system
- configure and test transmitters using the LOI and Field Communicator or AMS
- properly install/troubleshoot the Rosemount Smart Magnetic Flowmeter system

**Prerequisites**

Knowledge of basic flow fundamentals.

**Topics**

- Magnetic Flowmeter System
- Smart vs. Analog Transmitters
- Flow Tube Selection
- Configuring Using LOI, Communicator or AMS
- Local Operator Interface Functions
- Positive Zero Return
- Auxiliary Functions and Special Units
- Signal Conditioning
- System Troubleshooting and Maintenance
- Bench Testing/Digital Trims

### 8800 Smart Vortex Flowmeter

**Course 2341**

This 1-day course uses lectures and labs to teach the student how to install, configure and maintain the Rosemount Model 8800 Smart Vortex Flowmeter. The students will also learn the operation and interface capabilities of the Field Communicator. Students who complete this course will:

- explain the advantages and limitations of vortex flowmetering
- identify 8800 parts and functionality
- explain the Von Karmon effect and the principles of vortex shedding
- properly install and configure the Model 8800 Vortex
- commission and troubleshoot the Rosemount Model 8800

**Prerequisites**

Knowledge of basic flow fundamentals.

**Topics**

- Vortex Flowmeter Applications
- 8800 Vortex Flowmeter Overview
- Von Karmon Effect and Principles of Vortex Shedding
- Proper Installation
- Field Communicator Operation
- Start-Up and Commissioning
- Configuring the 8800 using the Field Communicator or AMS
- Troubleshooting and Maintenance
- Digital Trims/Calibration/Verification
- Digital Signal Processing

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### Courses 2015

#### January - June

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**Flow Measurement Courses**

Micro Motion Coriolis Technician

RF Vortex Technician

RF Magmeter Technician

**Process Systems Courses**

DeltaV Basic Implementation I

DeltaV Batch

DeltaV Implementation II

DeltaV Hardware & Troubleshooting

DeltaV Advanced Graphics

DeltaV System Administration

DeltaV Foundation Fieldbus

AMS Device Manager with DeltaV

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**Flow Measurement Courses**

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AMS Device Manager with DeltaV

**NOTE:** Schedule is subject to change without notice. Courses may be held in English, other courses can be held on demand.
Attain all the benefits your Emerson solution has to offer: Receive training from the experts at Emerson Educational Services. You will find a sustainable, competitive edge through classes that help maximize your investment.

Contact us at eu.education@emerson.com or visit www.emersonprocess.com/education