Emerson Education Services

Maximize Your Investment with Well-Trained Personnel

COURSE TYPES

ON-SITE TRADITIONAL

Through our on-site training services, we provide customers a Certified Instructor, courseware literature, and all hardware associated with supporting hands-on workshops. In North America, we deliver on-site training courses sponsored through our Partners' Education Program. This allows our customers the opportunity to access our Training Courses through their local business partner.

ELEARNING

Emerson eLearning offerings are professionally developed, engaging, flexible and up to date.
Emerson online learning programs provide a convenient opportunity to study about our technologies and solutions at any time. Our goal is to provide our customers a competitive advantage by empowering them with the latest knowledge in a growing range of topics.

VIRTUAL LEARNING

Emerson's Virtual Classroom delivers real- time value-based Instructor-Led Training to customers' desktops with full access to software systems. Students connect directly to classroom- based machines for the entire class! There is no travel required, which means fewer expenses for our customers. Class takes place in a live online training room using a teleconference bridge.

BLENDED LEARNING

Blended Learning is a contemporary approach to training that blends different teaching methods and deploys them via digital and online media
to maximize the effectiveness and convenience of learning. The Emerson Blended Learning approach combines various learning methods using a wide array of digital media. Blended Learning is Emerson's unique approach to delivering quality education while reducing out- of-production learner time.

MICRO TRAINING

Short "how-to" videos to accomplish specific tasks. The videos are ancillary and complementary to the traditional classroom training. Emerson subject matter experts share their knowledge by providing step-by-step instructions on how to accomplish simple to complex tasks.

Experiential [learning] is a philosophy and methodology in which educators purposefully engage with students in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values.

FISHER™

E-LEARNING COURSE e1310

Control Valve Fundamentals

Overview
This e-course provides basic control valve fundamentals covering industry standards for control valves, flow characteristics, operation and function of sliding stem and rotary valves & actuators, positioners, and control valve accessories.

Topics
- Introduction to Control Valves
- Control Valve flow characteristics
- Sliding Stem Control Valves
- Sliding Stem Actuators
- Ball valves and Eccentric Plug valves
- Butterfly Valves
- Rotary Actuators
- Positioners
- Control Valve Accessories

COURSE 1300 **CEUs: 2.8**

Fisher Control Valve Engineering I Introduction

Overview
This 4-day course reviews design and operating principles of control valves, actuators, positioners and related accessories. It describes the sizing and selection methods for a broad variety of control valves assemblies. Students will solve several demonstration sizing and selection problems using Fisher Specification Manager software and published materials, plus participate in equipment demonstrations and hands-on workshops. Students who complete this course will:

- Select the proper valve characteristic for a given process
- Choose suitable styles of control valves for an application
- Size control valves and actuators
- Properly apply positioners and instruments

Topics
- Control valve types: rotary/sliding stem
- Actuator selection and sizing
- Liquid valve sizing
- Gas valve sizing
- Positioners and transducers
- Valve selection guidelines
- Valve characteristics
- Cavitation & Flashing basics
- Noise basics

Prerequisites
Some experience with industrial control equipment including control valves and actuators would be helpful.

Audience
This course is for engineers, technicians and others responsible for the selection, sizing, and application of control valves, actuators and control valve instrumentation.

COURSE 1400 **CEUs: 2.8**

Fisher Valve Trim & Body Maintenance

Overview
This 4-day course and hands-on workshop explains how valves and actuators function and how they are installed and calibrated. It emphasizes installation, troubleshooting, parts replacement, and calibration of control valves, actuators, and FIELDVUE™ digital valve controllers. Those who complete this course will be able to:

- Correctly perform installation procedures
- Perform basic troubleshooting
- Properly apply and calibrate Fisher FIELDVUE DVC6200 digital valve controllers
- Change valve trim, gaskets and packing

Topics
- Control valve terminology
- Globe valves
- Packing
- Actuators, and digital valve controllers
- Bench set
- Seat leak testing
- Ball valves
- Butterfly valves
- Eccentric disc valves
- Valve characteristics

Prerequisites
Some experience in instrument calibration and in control valve maintenance, installation, and operation would be helpful.

Audience
This introductory course is for valve mechanics, maintenance personnel, instrument technicians, and others who are responsible for maintaining control valves, actuators and control valve instrumentation.

COURSE 1450 **CEUs: 2.8**

Fisher Control Valve & Instrument Troubleshooting

Overview
This 4-day course uses a very hands-on approach for troubleshooting and correcting many common control valve problems. The class will be introduced to the practice of basic valve sizing and selection. Valve problems such as cavitation, flashing, and aerodynamic noise are also discussed as well as common solutions to these problems using different control valve trims and materials. Instrumentation topics are expanded from course 1400 and 1700 to include troubleshooting and advanced calibration for split ranging, non-compatible signals, or using additional instruments such as a volume booster and trip valves. Loop performance issues due to stick-slip, high friction, and instrument operation are discussed.

Topics
- Control loop basics
- Influences on loop performance
- Control valve selection and sizing
- Valve troubleshooting
- Actuator troubleshooting
- Instrument selection
- Basic instrument troubleshooting
- Severe service considerations

Prerequisites
Completion of courses e1310 and 1400

Audience
This course is for experienced valve mechanics and maintenance personnel, instrument technicians, and others who will benefit from a broadened perspective of control valve performance and effect on total loop operation.

COURSE 1751 **CEUs: 2.1**

Fisher HART® based FIELDVUE™ Digital Valve Controllers using Emerson Field Communicators & ValveLink™ Mobile

Overview
This 3-day course provides hands-on experience working with FIELDVUE digital valve controllers using an Emerson 475 or AMS Trex™ Communicator. The class will discuss basic operation and installation of the FIELDVUE digital valve controllers. Students will practice installing and mounting FIELDVUE digital valve controllers onto sliding stem and rotary control valve assemblies, as well as perform basic configuration and calibration of FIELDVUE Instruments. Troubleshooting the digital valve controller using ValveLink Mobile software will be performed and basic data interpretation will be introduced.

Topics
- FIELDVUE digital valve controller theory of operation
- FIELDVUE instrument installation
- Diagnostic troubleshooting and data interpretation using ValveLink Mobile with AD and PD tier devices

Prerequisites
Some experience in instrument calibration and in control valve maintenance, installation, and operation would be helpful.

Audience
This course is for technicians, engineers and others responsible for installing, calibrating and basic troubleshooting Fisher FIELDVUE instruments using the Emerson Field Communicators with ValveLink Mobile.

COURSE 1752 **CEUs: 2.1**

Fisher HART® based FIELDVUE™ Digital Valve Controllers using Emerson Field Communicators & ValveLink Software

Overview
This 3-day course provides hands-on experience working with FIELDVUE digital valve controllers and ValveLink software. Students will be able to execute ValveLink software calibration and diagnostic routines and create an instrument database.

Topics
- Introduction to ValveLink Solo software
- Configuration with ValveLink software
- Calibration with ValveLink software
- ValveLink software advanced and performance Tier Diagnostics
- Troubleshooting
- Introduction to diagnostic data interpretation

Prerequisites
Some experience in instrument calibration and in control valve maintenance, installation, and operation would be helpful.

Audience
This course is for technicians, engineers and others responsible for installation, calibration and diagnostics for FIELDVUE digital valve controllers and ValveLink software. The primary focus of this course is to provide a comprehensive experience in managing digital valve controllers using the ValveLink software.

COURSE 1759 **CEUs: 2.1**

Diagnostic Data Interpretation using ValveLink Software for Fisher FIELDVUE Digital Valve Controllers

Overview
This 3-day course uses practical exercises and discussions to teach the student to interpret and analyze diagnostic data obtained using FIELDVUE digital valve controllers and ValveLink software. Students will perform diagnostic tests on a variety of valve/actuator combinations and use the data to determine bench set, dynamic error band, seat load, spring rate and other pertinent parameters. Students will also perform comparison tests on valve/ actuator assemblies containing configuration or operating flaws and use the data for troubleshooting purposes.

Topics
- Review of ValveLink software diagnostic tests
- Data interpretation
- Troubleshooting techniques
- Comparison testing techniques
- Performance diagnostics

Prerequisites
Students must have completed either 1751 or 1752

Audience
This course is for technicians, engineers and others responsible to collect and interpret valve diagnostic tests performed using ValveLink software.

COURSE 1766 **CEUs: 1.4**

Fisher FIELDVUE™ Digital Valve Controller DVC6200 SIS with ValveLink Software

Overview
This 2-day course provides hands-on experience working with FIELDVUE digital valve controllers DVC6200 Safety Instrument Systems (SIS) and ValveLink software.

Topics
- Safety Instrumented System Basics
- Digital Valve Controllers for Safety Instrumented Systems
- Configuration with ValveLink software
- Calibration with ValveLink software
- Detailed Setup and Device Diagnostics
- Local Control Panel wiring and set-up

Prerequisites
Some experience in instrument calibration and control valve maintenance, installation, and operation would be helpful.

Audience
This course is for technicians, engineers, and others responsible for installation, calibration and diagnostics for FIELDVUE digital valve controllers DVC6200 SIS and ValveLink software.

COURSE 7036 **CEUs: 1.4**

Fisher FIELDVUE Digital Valve Controller DVC6200 fieldbus with ValveLink Software

Overview
This 2-day course reviews the role and function of control valve positioners followed by a series of hands-on exercises to disassemble, inspect, assemble, install, and commission a FOUNDATION™ fieldbus FIELDVUE digital valve controller.

Topics

- Positioner Basics
- FOUNDATION fieldbus overview
- FIELDVUE digital valve controller installation and mounting
- Modes and status
- Configuration and calibration with AMS Trex™ Communicator and ValveLink Mobile
- ValveLink software guided Setup /Detailed Setup
- Tuning
- Tag management
- Pressure control
- ValveLink software diagnostics
- FIELDVUE instrument troubleshooting

Prerequisites
Some experience in instrument calibration and control valve maintenance, installation, and operation would be helpful.

Audience
This course is for technicians, engineers, and others responsible for installation, calibration and diagnostics of FOUNDATION fieldbus digital valve controller.

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