



## On-site Training - At Our Facility or Yours

We invite you to attend one of our measurement instrumentation training courses, either at an Emerson education center in one of our locations or at your facility. These courses use lecture and hands-on workshops to teach students to properly mount, install, configure, calibrate, troubleshoot, and maintain your measurement instrumentation and technologies.

With guidance from Emerson-certified trainers that understand your industry and bring deep product expertise into the classroom, you can expect to leave any of our training courses with more confidence in your ability to operate your measurement instrumentation and technologies.

#### Resources



Find Courses in MyTraining



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# ENSURE TIME SPENT IN TRAINING IS TIME WELL SPENT

Emerson's certified trainers have the following qualifications:

**Experienced** with field expertise in our Emerson technologies

**Educated** through rigorous technology coursework and certification processes

**Certified** on Emerson products and skilled in incorporating effective learning techniques





## Rosemount™ 3051 Pressure and Rosemount 3144P Temperature Transmitters - 2398

#### Overview:

This one-day course uses both lectures and labs to teach students how to install and maintain the Rosemount 3051 Pressure and Rosemount 3144P Temperature Transmitters. Students will also learn the operation and interface capabilities of the Field Communicator.

Students who complete this course will be able to:

- Identify Rosemount 3051 and Rosemount 3144P parts and functionality
- Explain the principles of operation of these transmitters
- Configure, calibrate and test the transmitters using the Field Communicator
- Properly install/troubleshoot the transmitters

#### **Topics:**

- Rosemount 3051 and Rosemount 3144P Overview and Principles of Operation
- Test Equipment Selection
- Sensor Selection and Wiring
- Bench Testing the Rosemount 3051 and Rosemount 3144P Transmitters
- Field Communicator Operation
- Digital Trims/Calibration
- Installation and Start-up
- Troubleshooting and Maintenance

#### **Prerequisites:**

Knowledge of basic pressure and temperature fundamentals and instrumentation.

#### **View Course Schedule Here >**

#### Rosemount Pressure, Temperature, and MultiVariable™ Flow Transmitters, Interactive Plant Environment - 2829

#### Overview:

This four-day course is designed for those individuals responsible for the installation, configuration, calibration, troubleshooting, and maintenance of Rosemount Pressure, Temperature, and MultiVariable Flow Transmitters. It combines lectures with benchtop labs and uses Emerson's interactive plant for scenario-based training. Students shall apply classroom knowledge directly to the interactive plant scenario labs.

Students who complete this course will be able to:

- Identify transmitter parts and functionality
- Explain the principles of operation of the transmitters
- Configure, calibrate, and test the transmitters using the field communicator, AMS Device Manager, and Engineering Assistant software
- Configure the compensated flow parameters
- Properly install and troubleshoot pressure, temperature, and MultiVariable flow transmitters

#### **Topics:**

- Rosemount Pressure, Temperature, and MultiVariable Flow Transmitters Overview and Principles of Operation
- Configuration, calibration and testing the transmitters using the field communicator, AMS Device Manager, and Engineering Assistant software
- Installation and Troubleshooting

#### **Prerequisites:**

Knowledge of basic pressure, temperature, and DP Flow fundamentals and instrumentation.





#### Rosemount Guided Wave and Non-Contacting Radar Level Transmitters - 2396

#### **Overview:**

This one-day course uses both lecture and handson labs to teach students how to install, configure, calibrate, and maintain the Rosemount 5408 & 5300 Series Radar Level Transmitters.

Students who complete this course will be able to:

- Explain the principles of operation of the Rosemount 5408 & 5300 Radar Level Transmitters
- Identify the transmitter parts and explain their functionality
- Properly install and wire the transmitters
- Configure and test the transmitters
- Properly troubleshoot the transmitters and install using Radar Master (Plus) software

#### **Topics:**

- Rosemount 5408 & 5300 Overview and Principles of Operation
- Installation
- Configuration
- Bench Testing
- Field Communicator Operation
- Radar Master Software Operation
- Calibration, Verification and Adjustments
- Troubleshooting and Maintenance
- Tank & Application/Probe Troubleshooting and Echo Handling Using Radar Master Software

#### **Prerequisites:**

Knowledge of basic level and interface fundamentals and instrumentation.

#### **View Course Schedule Here >**

## Micro Motion™ Coriolis Configurable Transmitters - Intermediate - 5710

#### Overview:

This one-day course consists of a blend of lectures and hands-on exercises that cover the installation, configuration, calibration checks and troubleshooting of the Micro Motion 5700 transmitters series. Courses held at customer specified sites can be customized to address specific transmitters and configuration tools. Public registration classes cover a broader range of equipment based on the needs of the attendees.

Students who complete this course will be able to:

- Explain the principle of operation for how a Micro Motion Coriolis meter works and the function of the key components
- Apply the installation best practices for orienting, mounting, and wiring the sensor and transmitter
- Configure the metering system to measure flow, density, and temperature for their application
- Apply a step-by-step process to perform basic troubleshooting of the most common meter and process issues

#### **Topics:**

- Micro Motion Coriolis Flow Meters Overview/ Principles for Operation
- Installation
- Configuration
- Calibration
- Troubleshooting

#### **Prerequisites:**

Basic understanding of the fundamentals of flow measurement, electricity, analog & frequency signal processing.





## Rosemount Wireless Self-Organizing Network with Host Integration - 2375

#### **Overview:**

This two-day course uses both lectures and hands-on labs to explain how self-organizing wireless networks function and how they are installed, setup, configured and integrated. It emphasizes planning, proper installation and startup, configuration, maintenance, and integration.

Students who complete this course will be able to:

- Correctly install and setup Emerson's 1410, 1410S, and 1420 Wireless Gateways
- Properly install and configure Emerson's Wireless Transmitters
- Properly integrate Host interfaces to the Wireless Gateway

#### **Topics:**

- How Self-Organizing Networks Function
- Self Organizing Networks Best Practices
- Network Components
- Emerson's Wireless 1410 Installation and Setup
- Network Parameters
- Wireless Transmitters Installation, Configuration, Maintenance and Calibration
- Using AMS Device Manager with Emerson's Wireless 1410 Wireless gateway
- Configuring Wireless Devices with AMS Device Manager
- Operation of the AMS Wireless Snap-On
- Modbus Serial Integration
- Modbus TCP Integration
- OPC Integration

#### **Prerequisites:**

Some experience in Wireless Networks and Host integration.

#### **View Course Schedule Here >**

### Rosemount DP Level & Electronic Remote Sensor (ERS)™ System - 2309

#### Overview:

This one-day course uses both lectures and labs to teach students how to install, configure, calibrate, troubleshoot and maintain the Rosemount 3051S Electronic Remote Sensors (ERS) System. The student will also learn the operation and interface capabilities of the Field Communicator.

Students who complete this course will be able to:

- Identify DP Level & Remote Seal parts
- Identify Rosemount 3051S ERS transmitter parts and explain their functionality
- Identify Rosemount 3051S ERS Hi & Lo Sensors
- Explain the principles of operation of the Rosemount 3051S ERS System
- Configure and test the Rosemount 3051S ERS system using Emerson's AMS Device Manager and the Field Communicator
- Perform Zero Trims and Calibrate the ERS Sensors
- Properly install & troubleshoot the Rosemount 3051S ERS System

#### **Topics:**

- DP Level & Remote Seal Technology
- Rosemount 3051S ERS Technology
- Rosemount 3051S ERS Overview and Principles of Operation
- Rosemount 3051S ERS / DP Level Installation
- Rosemount 3051S ERS Wiring
- Rosemount 3051S ERS Configuration with AMS Device Manager and the Field Communicator
- Rosemount 3051S ERS Module Assignments
- Rosemount 3051S ERS Scaled Variable
- Bench Testing the Rosemount 3051S ERS System
- Rosemount 3051S ERS Zero Trims and Calibration
- Troubleshooting and Maintenance

#### **Prerequisites:**

Knowledge of basic pressure and DP Level fundamentals and instrumentation.





### Rosemount 8700 Magnetic & 8800 Vortex Flowmeters - Introduction - 2394

#### **Overview:**

This one-day course uses both lectures and handson labs to teach students how to install, configure, calibrate, and maintain the Rosemount 8700 and 8800 series of Flow Meters. Students will also learn the operation and interface capabilities of the Local Operator Interface & Field Communicator.

Students who complete this course will be able to:

- Explain the differences and capabilities of the Rosemount Magnetic & Vortex Flow Meters
- Identify transmitter parts and explain functionality
- Explain Faraday's Law and the principles of operation of the Magnetic Flow Meter system
- Explain the Von Karmon effect and the principles of vortex shedding
- Configure and test transmitters using the LOI and Field Communicator
- Properly install/troubleshoot Rosemount Flow Meters

#### **Topics:**

- Rosemount Magnetic and Vortex Flow Meters Overview and Principles of Operation
- Installation
- Calibration
- Configuration
- Troubleshooting

#### **Prerequisites:**

Basic understanding of the fundamentals of flow measurement, electricity, analog & frequency signal processing.

#### **View Course Schedule Here >**

### Rosemount 3051S Pressure Transmitter - 2308

#### Overview:

This one-day course uses both lectures and labs to maximize the hands-on experiences and teach the student how to install, configure, calibrate, troubleshoot, and maintain the Rosemount 3051S Pressure Transmitter. Students will also learn the operation of the Field Communicator or AMS Device Manager.

Students who complete this course will be able to:

- Identify Rosemount 3051S parts and functionality
- Explain the principles of operation of the Rosemount 3051S
- Configure, calibrate and test the Rosemount 3051S using the Field Communicator
- Properly install, configure, calibrate, and troubleshoot

#### **Topics:**

- Rosemount 3051S Overview and Principles of Operation
- Rosemount 3051S Installation and Options
- Test Equipment Selection
- Configure and Bench Testing
- Configure and Test the Rosemount 3051S Advanced Features, such as: Alarm & Saturation Levels, Alarm Direction, Write Protection - Process Alerts, Scaled Variable
- Digital Trims/Calibration
- Troubleshooting and Maintenance

#### **Prerequisites:**

Knowledge of basic pressure fundamentals and pressure instrumentation.





#### Rosemount 3144P Temperature Transmitters - 2321

#### **Overview:**

This one-day course uses both lecture and hands-on labs to teach the student how to install, configure, calibrate and maintain the Rosemount 3144P Temperature Transmitters. Students will also learn the operation of the Field Communicator.

Students who complete this course will be able to:

- Identify Rosemount 3144P parts and explain functionality
- Explain the principles of operation of the Rosemount 3144P
- Configure, calibrate, and test Rosemount 3144P Temperature Transmitters using the Field Communicator
- Properly install and troubleshoot

#### **Topics:**

- Rosemount 3144P Overview and Principles of Operation
- Test Equipment Selection
- · Sensor Selection and Wiring
- Bench Testing
- Field Communicator Operation
- Digital Trims/Calibration
- Rosemount 3144P Dual Sensor Setup and Configuration
- Installation and Start-Up
- Troubleshooting and Maintenance

#### **Prerequisites:**

Knowledge of basic temperature fundamentals and temperature instrumentation

#### **View Course Schedule Here >**

#### **Micro Motion Coriolis Flow Meters - 2352**

#### **Overview:**

This three-day class consists of a blend of lectures and hands-on labs to teach the student how to install, configure, and calibrate the Micro Motion Coriolis metering system.

Students who complete this course will be able to:

- Learn the Micro Motion Series 1000 and 2000 transmitters using ProLink® III, HC475 and the Micro Motion Series 3000 interface devices
- Perform a master reset and use ProLink III to configure the Series 1000 and 2000, perform a flow calibration and solve troubleshooting problems
- On the third day, based on student need, we will cover one or all of the following topics: RFT9739 transmitter, T-Series, R-Series and Series 3000 platform, and an introduction to the Micro Motion 5700 transmitter
- Students will also learn the Modbus communications model, including RS-485 network requirements, memory structure, data types, functions, character framing, and message framing

#### **Topics:**

- Micro Motion Coriolis Flow Meter Overview and Fundamentals
- Installation Best Practices for Orienting, Mounting and Wiring the Sensor and Transmitter
- Configuring the Metering System to Measure Flow, Density and Temperature for the Application
- Troubleshooting for the Most Common Meter and Process Issues
- Explain the Fundamentals for the Modbus Protocol Model
- Configure, Commission, Read Process Data, View and Analyze Key Diagnostic Registers and Loop Test a Batch Application Using a Micro Motion Flow Meter

#### **Prerequisites:**

Knowledge of basic fundamentals of flow measurement, electricity, analog & frequency signal processing.





#### <u>Micro Motion Coriolis Flow Meters -</u> <u>Intermediate - 2358</u>

#### **Overview:**

This one-day course consists of both lectures and hands-on exercises to teach the student how to install, configure, calibrate and troubleshoot Micro Motion Series 1000 and 2000 transmitters.

Students who complete this course will be able to:

- Explain the fundamentals for how a Micro Motion Coriolis Flow Meter works and the functions of the key components
- Be able to apply the installation best practices for orienting, mounting, and wiring the sensor and transmitter
- Configure the metering system to measure available process variables from the device for their application
- Learn a step-by-step process to perform basic troubleshooting of the most common flow meter and process issues

#### **Topics:**

- Micro Motion Coriolis Flow Meter overview and functionality
- Installation
- Configuration
- Troubleshooting

#### **Prerequisites:**

Knowledge of basic fundamentals of flow measurement, electricity, analog & frequency signal processing.

#### **View Course Schedule Here >**

### Rosemount Liquid Analysis Measurement Theory - 2205

#### **Overview:**

This 7-hour class is fully customized to cover the specific measurements that you request. A certified trainer will cover up to four subjects in one day. The four subjects may be measurement or product related. The list of measurements that can be bundled into a tailored made training course are: pH, ORP, contacting conductivity, toroidal conductivity, turbidity, chlorine, dissolved oxygen, and ozone. Select an analyzer (course 2204) or transmitter (course 2202) to accompany the measurement theories for a well-rounded class.

#### **Topics:**

- Installation and Application Problems
- Configuration of Outputs / Alarms (if applicable)
- Use Diagnostic Features (if applicable)
- Sensor Calibration & Maintenance
- Troubleshooting

#### **Prerequisites:**

Knowledge of basic fundamentals of liquid analysis.





### **Registration Information**

To register online: visit MyTraining on our website.

To register by phone: Call Emerson Educational Services at 1-800-338-8158

To learn more, visit <a href="mailto:Emerson.com/MeasurementTraining">Emerson.com/MeasurementTraining</a>

Purchase order or credit card required for enrollment.

Credit cards preferred: Most major credit cards accepted.



Purchase orders must be made out to: **Emerson Process Management LLLP** c/o Educational Services 1100 West Louis Henna Blvd. - Bldg 1 Round Rock, TX 78681-7430 Payment Terms: Net 30 days Please Include on PO: Student's Name, Course Number

Emerson's Payment Terms (Net 30 Days), and Course Tuition Price

Please email all purchase orders to Education@Emerson.com

Please Note: To complete the registration process, attendees must register through MyTraining or call the registration center (800-338-8158). Only receipt of purchase order guarantees a seat.

#### Cancellations

You may cancel your reservations up to 14 calendar days prior to the start of the course without incurring a cancellation fee. 50 percent of the full tuition will be charged for cancellations received during the 14 days prior to the start of the course, and full tuition will be charged for failure to attend without cancelling. Substitutions are accepted until the first day of class. Scheduled courses may be cancelled due to low enrollment.

