

Process Analytical Instrumentation The Process Analytic Division of Rosemount Analytical is the world's premier supplier of analytical instrumentation and systems for process gas analysis, combustion analysis, and control. Continuous emissions monitoring systems, in-situ oxygen and combustibles analyzers, carbon monoxide analyzers, and opacity monitors are covered by some 15 courses from 1 to 5 days in length. The courses can be conducted at our training center or at the customer's site. These courses focus on product installation and maintenance, as well as the relationships between devices.

**951C Chemiluminescence/
Analyzer**

Course 2102

Overview

This 1-day course uses lectures and labs to teach the student how to install and maintain the Rosemount Analytical Model 951C Chemiluminescence Analyzer. Students will:

- identify subassemblies and explain their functionality
- explain the principles of operation
- calibrate and test
- properly install and troubleshoot

Topics

- 951C Overview and Principles of Operation
- Test Equipment Selection
- Bench Testing the 951C
- Calibrating the 951C Chemiluminescence Analyzer
- Installation and Start-Up
- Troubleshooting and Maintenance

Price/Location/Start Date:

Call 800-433-6076 ext. 7045 to Discuss

**Continuous Emissions Monitoring
Systems (CEMS)**

Course 2157

This course is for instrument technicians responsible for the maintenance of Continuous Emissions Monitoring Systems.

Overview

This 3-day course covers basic fundamentals and the theory of operation, installation, calibration and maintenance of Continuous Emission Monitoring Systems.

Topics

- Environmental Requirement
- Process Applications
- Theory of Operation
- Sample System Instrument
 - Installation and Troubleshooting
 - Hardware and Maintenance

Price/Location/Start Date:

Call 800-433-6076 ext. 7045 to Discuss

400A Hydrocarbon Analyzer

Course 2103

Overview

This 1-day course uses lectures and labs to teach the student how to install and maintain the Rosemount Analytical Model 400A Hydrocarbon Analyzer. Students will:

- identify subassemblies/explain functionality
- explain the principles of operation
- calibrate and test
- properly install and troubleshoot

Topics

- 400A Overview and Principles of Operation
- Test Equipment Selection
- Bench Testing the 400A
- Calibrating the 400A Hydrocarbon Analyzer
- Installation and Start-Up
- Troubleshooting and Maintenance

Price/Location/Start Date:

Call 800-433-6076 ext. 7045 to Discuss

To enroll in Process Analytic courses please call 800-433-6076 Ext. 7045 or 440-914-1261 Ext. 7045. For additional contact information refer to the appropriate contact on page 119. Updated dates & locations are available on our website at www.emersonprocess.com/education.

NGA 2000 Analyzers**Course 2107****Overview**

This course consists of 8 hours per selected analyzer:

- NGA Platform
- NGA CLD
- NGA WCLD
- NGA FID
- NGA HFID

Lectures and labs are used to teach the student how to install, maintain, and troubleshoot the NGA Series of analyzers. Students who complete this course will:

- identify individual modules and their functionality
- understand the basic theory of operation of each module
- set up software variables for proper calibration and operation
- understand and properly use software diagnostics

Topics

- NGA Overview
- NGA as a System
- NGA Testing
- NGA Start-Up and Installation

Price/Location/Start Date:

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MLT Analyzers**Course 2110****Overview**

This 3-day course uses lectures and labs to teach the relationship of MLT analyzers, platforms and other menu structures. The course will teach the student how to install, maintain and troubleshoot the MLT series of analyzers. Application and selection will be briefly covered including the hazardous area requirements. Students will

- identify modules & their functionality
- understand the basic theory of operation
- set up software variables for proper calibration and operation
- use the software diagnostics to troubleshoot problems

Topics

- Overview of MLT
- Theory of Operation
- Installation
- Configuration and Calibration
- Maintenance and Troubleshooting

Price/Location/Start Date:

Call 800-433-6076 ext. 7045 to Discuss

BINOS/OXYNOS/HYDROS Analyzers**Course 2113****Overview**

This 3-day course familiarizes the student with the non-dispersive infrared, electrochemical oxygen, paramagnetic oxygen and thermal conductivity measurement techniques used in the BINOS, OXYNOS and HYDROS gas analyzers. Maintenance and troubleshooting are covered in detail. Typical applications and start-up procedures are discussed as well.

Topics

- Objectives
- Theory
- Installation
- Troubleshooting
- Maintenance

Price/Location/Start Date:

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X-STREAM PGA (Process Gas Analyzers)

Course 2170

Overview

This 3-day course uses lectures and labs to teach the student the non-dispersive infrared, electrochemical or paramagnetic oxygen and thermal conductivity measurement techniques used in the analyzer. Applications will be reviewed including the various housings to meet the environmental needs. The student will:

- learn the theory of operation
- set up software variables for proper calibration and installation
- understand and use the troubleshooting tools including diagnostics

Topics

- Overview and Theory
- Application and Selection of Options
- Installation and Troubleshooting
- Maintenance and Calibration

Price/Location/Start Date:

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Oxygen and Combustion Analyzer Maintenance including Oxymitter, X-STREAM 02, 5081FG and OCX 800

Course 2153

Overview

This 3-day course covers the combustion requirements for oxygen analyzers in general and the installation, operation, calibration and maintenance of the World Class, Oxymitter, X-STREAM 02, 5081FG Oxygen, and OCX analyzer specifically.

Topics

- Combustion Requirements
- Methods of Oxygen Analysis
- Typical Uses of Oxygen Analysis
- Combustion Efficiency
- Zirconia (ZrO₂) Oxygen Analysis
- Theory of Operation
- Oxygen Analyzer
 - Installation; - Hardware; - Maintenance
 - Troubleshooting; - Hart Communications

Price/Location/Start Date:

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CCO 5500 CO Analyzer Maintenance

Course 2168

Overview

This 2-day lab/lecture course covers the theory, application and operation of the CCO5500. The concept of infrared absorption spectroscopy is defined and explained to the class. Focusing on applications, the instrument is reviewed and the students are taught to install and maintain the analyzer. Students will:

- understand the basic theory of operation
- learn to install and start up the analyzer including calibration
- use the software diagnostics to troubleshoot problems

Topics

- Overview of the CCO 5500, Carbon Monoxide Analyzer
- Theory of Operation, Appropriate Applications
- Installation, Configuration and Calibration
- Troubleshooting and Maintenance

Price/Location/Start Date:

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PowerVue™ / Hagan Pneumatic Power Positioners**Course 2150****Overview**

This 1-day course covers the application requirements of our power positioners in general and the installation, operation, calibration, and maintenance of these products.

Topics

- Introduction to Power Positioners
- Description and Operation
- Installation and Operational Setup
- Calibration of Power Positioners
- Troubleshooting Power Positioners
- Power Positioner Maintenance
- Retrofit Kits
- Power Positioner Options

Price/Location/Start Date:

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OPM 3000/4000 - Opacity Monitor Maintenance**Course 2169****Overview**

This 2-day course is a combination of labs and lectures with the objective of teaching the theory and operation of the Opacity Monitor. Product application will be reviewed. Correct selection of equipment, installation, and start up are critical and will be covered in detail. Operational diagnostics and maintenance are explored with the goal of allowing the student to recognize and correct any issues promptly. EPA certification and quarterly audits will be reviewed, but detailed planning will be site specific and not covered.

Topics

- Overview of the Opacity Monitor
- Theory of Operation
- Installation and Start Up
- Troubleshooting and Maintenance
- Audit and Reporting requirements

Price/Location/Start Date:

Call 800-433-6076 ext. 4521 to Discuss