2022 Classes Offered

- XSeries - Level One (Z900)
- XSeries - Level Two (Z901)
- XSeries - Level One VIRTUAL (Z903)
- RMC-100 & XIO (Z910)
- NGC / PGC1000 - Level One (Z920)
- NGC / PGC1000 - Level Two (Z921)
- NGC / PGC1000 - Level One VIRTUAL (Z922)
- WinCCU Host (Z930)
- WinCCU Host VIRTUAL (Z931)
- Custom Courses

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XSeries Level One - Z900
In Person, Basics Class for XFC and µFLO

Course description
This course will instruct the student to set up and use the XFC or µFLO for proper installation and operation of AGA3 measurement, including calibration. It will also cover multitube measurement, saving and loading configurations, and loading software.

Learning Objectives
Upon completion of this course, the participants will be able to:
- Identify hardware components
- Use PCCU32 software for setup, implementation of flow calculations, applications, calibration and data collection
- Set up single AGA-3 measurement tube
- Set up additional AGA-3 measurement tube, using an XMV connected to COM2
- Set up various methods of local communication
- Manage configuration files using Update Cold Start and the 32-Bit Loader
- Set up data trending, modify unit display, and set up basic math operations

Duration
This is a 3-day class, 8:30 am to 4:30 pm each day. Doors open at 8:00 am local time.

Course type and methods
This is an instructor-led course with interactive classroom discussions, presentations, and practical exercises. At least 50% of time is spent on hands-on operation and lab activities. Laptops will be provided.

Cost
$1,650 / student; Lunch provided daily

Prerequisites
Basic knowledge of gas measurement and proficient computer skills

Topics
- PCCU overview and setup
- Meter set up and operation
- Gas Measurement
- AGA-3 Measurement tube setup
- Sampler setup using DO
- Calibration
- Collecting and saving data
- Configurable Calibration Report
- Update Cold Start
- Screen Save
- 32-Bit Loader
- Math Operations
- Unit display
- Local and Modbus communications
- Installing XMV using COM2
- Enhanced Mode (Bureau of Land Management)
- AGA-7 tube setup (optional)
- Trending
- Troubleshooting

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XSeries Level Two - Z901
In Person Class for XFC, XRC and XIO

Course description
This course will instruct the student on the use of the advanced features of the XSeries devices, including the new XIO. This course will delve more into operations and some of the advanced applications available. Some of the TFIO modules will also be covered.

Learning Objectives
Upon completion of this course, the participants will be able to:
- Identify hardware components
- Use PCCU32 software for basic meter setup, configuring the different TFIO modules, including adding and properly setting up the Valve Control application, calibration of the Analog Inputs (AI) and Outputs (AO)
- Set up various methods of local communication
- Manage configuration files using Update Cold Start and the 32-Bit Loader
- Set up data trending, modify unit display, and set up basic math operations
- Brief review of AGA3 Measurement and adding an XMV using the XIO

Topics
- PCCU overview and setup
- Collecting and saving data
- Update Cold Start
- 32-bit Loader
- Trending
- TFIO Modules
- Valve Control
- Unit display
- Remote and local communications
- Modbus communication
- XMV
- PCCU software setup
- Operations
- Alarm System
- Safety Shutdown System
- Roll Based Access
- Troubleshooting

Duration
This is a 2-day class, 8:30 am to 4:30 pm (CDT) each day.

Course type and methods
This is an instructor-led, virtual course with interactive online discussions, presentations, and practical exercises. At least 50% of time is spent on hands-on software operation and lab activities. Laptops will be provided.

Cost
$1,100 / student; Lunch provided daily

Prerequisites
XSeries Level One - Z900 or XSeries Level One Virtual - Z903

XSeries Virtual Level One - Z903
Virtual Class for XFC and µFLO

Course description
This remote course will instruct the student in the basics of installation and operation of the XSeries or µFLO flow computer.

Learning Objectives
Upon completion of this course, the participants will be able to:
- Use PCCU32 software for set up, implementation of flow calculations, applications, calibration, reporting and data collection
- Set up single AGA-3 measurement tube
- Set up various methods of local communication
- Manage configuration files using Update Cold Start and the 32-Bit Loader
- Set up data trending, modify unit display, and set up basic math operations

Topics
- PCCU overview and set up
- Meter set up and operation
- Gas Measurement
- AGA-3 measurement tube set up
- Sampler set up using DO
- Calibration
- Collecting and saving data
- Configurable calibration report
- Update cold start
- Screen save
- 32-Bit loader
- Math operations
- Unit display
- Local and Modbus communications
- Installing XMV using COM2
- Enhanced mode (Bureau of Land Management)
- AGA-7 tube set up
- Trending

Duration
This is a 2-day class, 8:30 am to 4:30 pm (CDT) each day.

Course type and methods
This is an instructor-led, virtual course with interactive online discussions, presentations, and practical exercises. At least 50% of time is spent on hands-on software operation and lab activities.

Cost
$1,650 / student; Lunch provided daily

Prerequisites
XSeries Level One - Z900 or XSeries Level One Virtual - Z903

Cost
$1,100 / student
RMC-100 and XIO - Z910
In Person Class

Course description
This course will instruct the student to set up and use the RMC-100. The RMC-100 is used in the XCore product line. This product has extra horsepower and features to allow full well pad automation. This course will cover some of the advanced apps and operations. It also interfaces with the new ABB XIO.

Learning Objectives
Upon completion of this course, the participants will be able to:

• Use PCCU 32 software for measurement tube setup, adding and properly setting up the ABB Plunger Application, calibration of the Analog Inputs (AI) and Outputs (AO), configuring the different TFIO modules and the PID application
• Set up various methods of local communication
• Manage configuration files using Update Cold Start and the 32-Bit Loader
• Set up data trending, modify unit display, and set up complex operations

Topics
- PCCU overview and setup
- RMC set up and operation
- Flow and pressure products, such as Coriolis and 266
- Update cold start
- 32-bit loader
- TFIO modules
- Trending
- PID controls
- Unit display
- Remote and local communications
- Modbus communications
- Operations
- Plunger lift
- Gas lift
- Alarm systems
- Safety shutdown systems
- XIO
- Troubleshooting

Prerequisites
Proficient computer skills and a general knowledge of natural gas measurement (or XSeries Level One - Z900 or Z903)

Duration
This is a 3-day class, 8:30 am to 4:30 pm each day. Doors open at 8:00 am local time.

Cost
$1,650 / student; Lunch provided daily

Course type and methods
This is an instructor-led course with interactive classroom discussions, presentations, and practical exercises. At least 50% of time is spent on hands-on operation and lab activities. Laptops will be provided.

NGC8200 / PGC1000 Level One - Z920
In Person Class

Course description
This course will instruct the student in the basics of installation and operation of the NGC8200 / PGC1000 gas chromatograph, as well as its interaction with the ABB flow computer.

Course type and methods
This is an instructor-led course with interactive classroom discussions, presentations, and practical exercises. At least 50% of time is spent on hands-on operation and lab activities. Laptops will be provided.

Learning Objectives
Upon completion of this course, the participants will be able to:

• Install hardware
• Install and leak-check sample tubing
• Identify hardware components
• Disassemble and reassemble primary GC components
• Set up PCCU32 software
• Use PCCU32 software for start up, maintenance and calibration
• Set up various methods of local communication
• Learn basic chromatography in the NGC/PGC1000
• Perform historical collection
• Set up Modbus communication
• Send live analysis to flow computer using the Therms application
• Understand portable GC operation

Topics
- Equipment installation and set up
- Analysis set up and manual peak find
- Collecting and saving data
- Save and restore
- 32-bit loader, flash, and multiple file packages
- Reporting
- Calibration
- Validation
- Ethernet connectivity
- Local communication
- Modbus communication
- Therms
- Portable
- Operations

Prerequisites
Basic knowledge of gas analysis and chromatography and proficient computer skills

Duration
This is a 3-day class, 8:30 am to 4:30 pm each day. Doors open at 8:00 am local time.

Cost
$1,650 / student; Lunch provided daily
**NGC8200 / PGC1000 Level Two - Z921**

*In Person Class*

**Course description**
This course will instruct the student in the more advanced setup and operation of the NGC/PGC1000 gas chromatograph, as well as its interaction with the ABB flow computer.

**Learning Objectives**
Upon completion of this course, the participants will be able to:
- Disassemble and reassemble primary GC components
- Troubleshoot and replace hardware components
- Perform manual peak find for setup and troubleshooting
- Manage flash and configuration files using 32-bit loader and save and restore functions
- Set up trending and operations
- Understand chromatography - advanced concepts
- Operate unit manually, open and close valves, check pressures, and troubleshoot results
- Understand and troubleshoot alarms
- Set up TCP Modbus communication
- Send live analysis to a flow computer using the NGC client application
- Control chromatograph based on measurement tube feedback

**Topics**
- Ethernet set up
- Analysis set up and peak find
- Manual setup and operation
- 32-bit loader, flash, and multiple file packages
- Troubleshooting alarms, chromatograms, and diagnostics
- Saving calibration to GC module
- SD card data manipulation
- Operations and holding registers
- Modbus communication
- Trending
- Portable NGC
- Role based access control

**Prerequisites**
Basic knowledge of gas analysis and chromatography as taught in NGC 8200/PGC100 Level One (Z920 or Z922), PCCU32 software, and proficient computer skills.

**Duration**
This is a 3-day class, 8:30 am to 4:30 pm each day. Doors open at 8:00 am local time.

**Cost**
$1,650 / student; Lunch provided daily

**Course type and methods**
This is an instructor-led course with interactive classroom discussions, presentations, and practical exercises on fully functioning equipment. At least 50% of time is spent on hands-on operation and lab activities. Laptops will be provided.

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**NGC/PGC1000 Virtual Level One - Z922**

*Virtual Class*

**Course description**
This remote course will instruct the student in the basics of installation and operation of the NGC/PGC1000 gas chromatograph.

**Learning Objectives**
Upon completion of this course, the participants will be able to:
- Install hardware
- Install and leak-check sample tubing
- Identify hardware components
- Set up PCCU32 software
- Use PCCU32 software for start up, maintenance, and calibration
- Understand basic Chromatography in the NGC/PGC1000
- Perform historical collection
- Learn analyzer software - loading and backup

**Topics**
- Equipment installation and setup
- Analysis setup and peak find
- Collecting and saving data
- Flash using the 32-bit loader
- Reporting
- Calibration
- Validation
- Ethernet connectivity
- Local communication

**Prerequisites**
Basic knowledge of gas analysis and chromatography.

**Duration**
This is a 2-day class, 8:30 am to 4:30 pm (CDT) each day.

**Course type and methods**
This is an instructor-led, virtual course with interactive online discussions, presentations, and practical exercises on fully functioning equipment. At least 50% of time is spent on hands-on software operation and lab activities.

- Students must have a computer with a high-speed internet connection and webcam
- Latest version of PCCU must be installed prior to class. A link to download the PCCU software will be provided prior to class, along with information on the remote connection method. (Full admin rights are required to install PCCU).
- A headset with mic is recommended

**Cost**
$1,100 / student
Host Communications - Z930

**In Person Class**

**Course description**
This course will instruct the student to set up, navigate and operate WinCCU32 software.

**Learning Objectives**
Upon completion of this course, the participants will be able to:
- Set up WinCCU32 and WinCPC software
- Create and manage meter identifications (IDs)
- Determine communication type and define communication ports
- Execute remote data collection and archiving long-term database
- Report, trend, and edit data
- Generate, edit, and modify custom reports
- Set up scheduling and alarms

**Topics**
- WinCCU32 and WinCPC (Windows Com Port Controller)
- Meter ID management
- Data collection and reporting
- Audit trail (archive file)
- Templates
- Long-term database editor
- Trending
- Alarms
- Scheduling

**Prerequisites**
Basic knowledge of gas measurement and proficient computer skills

**Duration**
This is a 3-day class, 8:30 am to 4:30 pm each day. Doors open at 8:00 am local time.

**Cost**
$1,650 / student; Lunch provided daily

**Course type and methods**
This is an instructor-led course with interactive classroom discussions, presentations, and practical exercises on fully functioning equipment. At least 50% of time is spent on hands-on operation and lab activities.
- Laptops will be provided.

WinCCU Virtual - Z931

**Virtual Class**

**Course description**
This remote course will instruct the student how to set up, navigate, and operate WinCCU32 software.

**Learning Objectives**
Upon completion of this course, the participants will be able to:
- Set up WinCCU and WinCPC software
- Create and manage meter identifications (IDs)
- Determine communication type and define communication ports
- Execute remote data collection and archiving long-term database
- Report, trend and edit data
- Generate, edit and modify custom reports
- Set up scheduling and alarms

**Topics**
- WinCCU and WinCPC (Windows Com Port Controller)
- Meter ID management
- Data collection and reporting
- Audit trail (archive file)
- Templates
- Long-term database editor
- Trending
- Alarms
- Scheduling

**Prerequisites**
Basic knowledge of gas measurement and proficient computer skills

**Duration**
This is a 2-day class, 8:30 am to 4:30 pm (CDT) each day.

**Cost**
$1,100 / student

**Course type and methods**
This is an instructor-led, virtual course with interactive online discussions, presentations, and practical exercises on fully functioning equipment. At least 50% of time is spent on hands-on software operation and lab activities.
- Students must have a computer with WinCCU, a high-speed internet connection and webcam
- A headset with mic is recommended
XSeries, GC and WinCCU
Custom Class

Course description
This course will follow the same format as the scheduled classes, catering to specific customer request.

Course type and methods:
This is an instructor-led course with interactive classroom discussions, presentations, and practical exercises on fully functioning equipment. At least 50% of this course is hands-on operation and lab activities. Laptops will be provided.

Topics:
Class / customer dependant

Duration:
This is a 3-day, custom class.

Cost:
$1,650/person plus a single seminar fee of $2,650
A discount will be applied to the seminar fee according to the following number of participants:
• 1 to 4 participants: 0% discount
• 5 to 7 participants: 5% discount
• 8 to 10 participants: 10% discount

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ABB has helped customers achieve optimized equipment performance by providing cost-effective, high quality, technical training. Our trainers have over 65 years of experience in the gas measurement industry. From equipment testing, field servicing and remote troubleshooting, they offer a wealth of information to increase your knowledge and productivity.

For a complete training schedule (subject to change), please visit:
abb.com/totalflow-training

For questions or inquiries, please email:
US-IAMA.training@us.abb.com
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Did you know?
ABB has thousands of coriolis meters installed in the oil and gas industry throughout the world.