

SIEMENS

2013 Training Directory

Education Services



www.siemens.com/esonline

A MESSAGE TO OUR STUDENTS

Welcome to the 2013 Training Directory!

Inside you will find offerings for all of your training needs from basic HVAC and Fire information to Siemens systems and product training.

I invite you to look through the directory and review our offerings. If you don't see exactly what you need, we can develop custom training to meet your employees' specific needs. My team can work directly with you to create a customized development path for your employees.

I am pleased to announce training on our two new products, Desigo Control Center and Cerberus™ PRO. For a complete description of these classes, please see pages 23-24 and 64-67.

Our new web customer portal is now available! It will allow you to access online training, manage your development and request enrollments for our instructor-led classes across the country. It offers a dynamic schedule that will make it easy for you to get the training you need to perform your job. Take a minute to browse the portal at www.siemens.com/esonline.

We continue to update our CD training offerings to offer new and improved titles to meet your training needs. See page 37 for more information on our self-study offerings. We look forward to working with you in the coming year. We value and appreciate your feedback and strive to continually improve our training offerings to meet your needs.

Best Regards,



KAREN PETERSEN



KAREN PETERSEN
Manager,
Education Services
Customer Training

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NOTE: Prices in this directory apply during the period from October 1, 2012 through September 30, 2013, but are subject to change. For more information about training, call **1-800-487-7771** or send an email to: educationservices.industry@siemens.com.

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**BUILDING AUTOMATION,
MAINTENANCE & PLANNING:**
CLASSROOM TRAINING
OVERVIEW COURSES
SELF-STUDY MATERIALS





Training Options

We offer three types of Building Automation Training:

1. CLASSROOM TRAINING WITH HANDS-ON LABS (3 to 4 days)

These courses are specifically designed to teach students to use Siemens Industry products to control facilities more efficiently, reduce energy costs and improve building occupants' comfort. Our classroom training provides objective-based learning and includes hands-on labs to allow students to practice with our building controls hardware and software. Individual work stations will be provided for each student to use during the hands-on labs. Enrollment is limited so that instructors may give individual attention to each student. These classes are scheduled at local Siemens Industry offices and can be taught at customers' facilities.

See pages 11-24 for course descriptions and pages 25-32 for training dates and locations.

How to enroll

Call 1-800-487-7771.

Lodging and transportation

Students are responsible for their lodging and transportation when attending training at any location. Hotel and travel recommendations are included in the confirmation letters sent to students after enrolling.

Confirmation

If a confirmation letter is not received three weeks before the class begins, call 1-800-487-7771.

Cancellation policy

Students who cancel within 21 calendar days of the class start date will be charged 50% of the tuition. Students will be charged 100% of the tuition if they cancel the day of the class or do not attend. The cancellation fee may be waived if your organization sends a qualified student as a substitute.

2. OVERVIEW TRAINING (4 to 6 hours)

Overview courses are four to six hours in length. They are taught at customers' facilities or at local Siemens Industry offices by the personnel who install or service our systems.

See pages 33-36 for course descriptions.

Contact your local Siemens Industry office for more information.

3. SELF-STUDY MATERIALS

Our CD and online (www.siemens.com/esonline) training offers many self-study modules about our building controls systems and general building information. This training can be used to introduce students to our systems or to review information learned in an earlier class or through job experience. New CDs and web-based training modules will be added throughout the year.

See page 37 for details on the self-study training and page 76 for the CD order form.

CONTACT US:

If you have questions, call 1-800-487-7771 or send an email to: educationservices.industry@siemens.com.

Building Automation Training Team



JEREMY BELL
Certified Instructor



MIKE BINKOWSKI
Certified Instructor



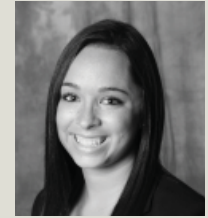
DANIEL BROWNE
Certified Instructor



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Certified Instructor



ERNIE GLENN
Certified Instructor



NICOLE FITZGERALD
Training Coordinator



RICK GREENHOE
Certified Instructor



BILL HARRIS
Certified Instructor



JEFF HEAD
Certified Instructor



NOEL HIPOLITO
Certified Instructor



JON ISTRE
Certified Instructor



TERESA GRACE-REGAN
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JIM ROWE
Certified Instructor



MIKE SAMUEL
Certified Instructor



JAMES STEPHENS
Certified Instructor



BRENDA TAYLOR
Training Coordinator



JOHN TRABER
Certified Instructor



ANDREW WEAVER
Certified Instructor



JOSHUA WEBB
Certified Instructor



DAN ZEDAN
Certified Instructor



CURTIS OLLER
Manager



AMANDA ROZIER
Sales Executive

TRAINING COORDINATORS

OFFICE LOCATIONS

United States:

ALABAMA

Birmingham
205-403-8388

ALASKA

Anchorage
907-563-2242

Fairbanks
907-479-7034

Juneau
907-364-2543

ARIZONA

Phoenix
602-567-2200

ARKANSAS

Little Rock
501-374-5420

CALIFORNIA

Los Angeles
714-761-2200

Sacramento
916-553-4444

San Diego
858-693-8711

San Francisco
510-783-6000

COLORADO

Colorado Springs
719-266-6565

Denver
303-279-8500

DISTRICT OF COLUMBIA

Washington, DC
301-837-2600

FLORIDA

Jacksonville
904-527-6000

Miami
954-364-6600

Orlando/Tampa
407-571-1900

Palm City
772-419-2800

Pensacola
850-433-5995

Tallahassee
850-504-0344

GEORGIA

Atlanta
770-935-2000

Savannah
912-239-9820

IDAHO

Boise
208-658-9107

Moscow
208-883-8330

ILLINOIS

Chicago
847-803-2700

Normal
309-664-2460

INDIANA

Indianapolis
317-293-8880

IOWA

Des Moines
515-963-1400

KANSAS

Kansas City
913-905-6700

Wichita
316-267-5814

KENTUCKY

Louisville
502-267-1571

LOUISIANA

Lafayette
337-233-7431

New Orleans
504-466-9300

MAINE

Scarborough
207-885-4100

MARYLAND

Baltimore
301-837-2600

Beltsville
301-837-2600

MASSACHUSETTS

Boston
781-575-1900

MICHIGAN

Detroit
734-456-3800

Grand Rapids
616-538-1611

MINNESOTA

Minneapolis
651-631-8533

MISSISSIPPI

Jackson
601-718-1310

MISSOURI

Kansas City
913-888-2646

St. Louis
314-567-5570

NEBRASKA

Kearney
308-237-2200

Omaha
402-891-8174

NEVADA

Las Vegas
702-855-5300

NEW JERSEY

Florham Park
973-593-2600

NEW MEXICO

Albuquerque
505-798-9644

NEW YORK

Albany
518-782-0131

Buffalo
716-568-0983

Falconer
888-286-6565

Long Island
631-218-1000

New York City
973-575-6300

Rochester
585-797-2300

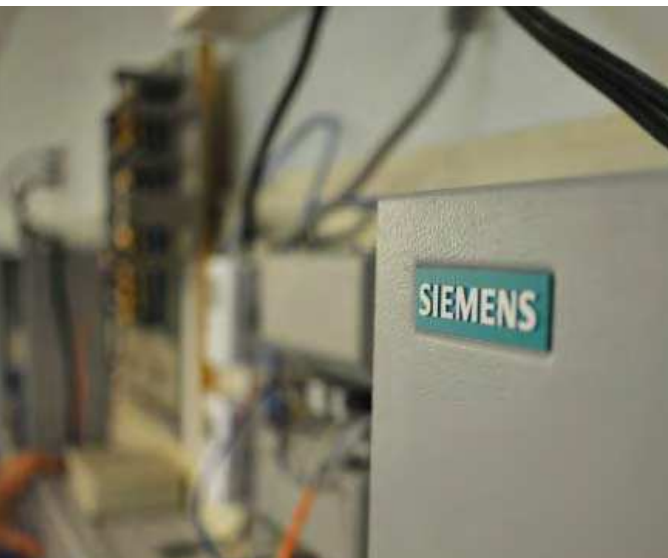
Syracuse
315-437-2726

NORTH CAROLINA

Charlotte
704-847-1680

Greensboro
336-691-0740

Raleigh-Durham
919-469-5095



NORTH DAKOTA

Fargo
701-237-3763

OHIO

Cincinnati
513-742-5590

Cleveland
216-332-7360

Columbus
614-846-9540

OKLAHOMA

Oklahoma City
405-787-4390

Tulsa
918-615-1430

OREGON

Eugene
541-338-4096

Portland
503-207-1900

PENNSYLVANIA

Harrisburg
717-697-4656

Philadelphia
215-654-8040

Pittsburgh
412-257-2111

RHODE ISLAND

Warwick
401-732-4787

SOUTH CAROLINA

Columbia
803-765-9070

SOUTH DAKOTA

Rapid City
605-343-7037

Sioux Falls
605-336-3788

TENNESSEE

Memphis
901-377-6223

Nashville
615-832-0500

TEXAS

Austin
512-339-6991

Dallas
972-550-8488

Houston
281-949-3000

San Antonio
210-641-2921

UTAH

Salt Lake City
801-316-2500

VERMONT

Albany, NY
518-782-0131

VIRGINIA

Richmond
804-222-6680

Roanoke
540-563-8877

Virginia Beach
757-490-6026

WASHINGTON

Mt. Vernon
360-336-3300

Seattle
425-507-4372

Spokane
509-891-9070

WISCONSIN

Appleton
920-739-6885

Eau Claire
715-835-6696

Milwaukee
414-475-3700

Port Edwards
715-887-4400

*Canada:***ALBERTA**

Calgary
403-259-3404

Edmonton
780-486-1234

BRITISH COLUMBIA

Vancouver
604-273-7733

MANITOBA

Winnipeg
204-774-3411

NOVA SCOTIA

Halifax
902-835-8316

ONTARIO

Brampton
905-799-9937

Hamilton
905-643-2200

London
519-680-2380

Ottawa
613-733-9781

Toronto
905-799-9937

QUEBEC

Montreal
514-374-0044

Quebec City
418-622-2991



San Juan
787-622-9293

*Headquarters***EDUCATION SERVICES**

Buffalo Grove, IL
1-800-487-7771

CLASSROOM TRAINING COURSES

Training Recommendations

Depending on job responsibilities, we recommend these courses:

For APOGEE BAU	5-620*	5-615	5-625	5-630	5-635	5-652	5-670	5-690	5-900
For APOGEE with BACnet	5-720	5-615	5-725	5-630	5-635	5-652	5-670	5-690	5-900
Operate a building automation system	1	2/3	2/3					1	
Create or edit programs for building automation systems using PPCL	1			2	3				
Operate field panel(s) or TECs	1	2						1	
Manage your facility's energy consumption using your building automation system	1								
Administer the data from your building automation system using InfoCenter Suite	1					2			
Monitor and control laboratory rooms using Siemens devices	1						2		
Advanced troubleshooting on APOGEE system	1	2/3	2/3					1	4/2
PREREQUISITES	None	5-620 - or - 5-710 - or - 5-720	5-620 - or - 5-710 - or - 5-720	5-620 - or - 5-690 - or - 5-720	5-620 - or - 5-720 and 5-630	5-620 - or - 5-690 - or - 5-710 - or - 5-720	5-620 - or - 5-690 - or - 5-710 - or - 5-720	None	5-620 - and - 5-625 - and - 5-615 - or - 5-690

NOTE: For experienced APOGEE system operators who have attended 5-620 or passed the online test for this class, and completed the 5-625 class, we recommend that you attend 5-710 to learn our APOGEE with BACnet system. This class is fast-paced and contains the same topics taught in 5-720 and 5-725.

MASTER TRAINING PATHS:

You will receive a plaque if you successfully complete one of these training paths (curricula) within three years.

MASTER OPERATOR CURRICULUM

APOGEE Systems **APOGEE Systems with BACnet**
 5-620* 5-720
 5-615 5-615
 5-625 5-725
 or 5-690

MASTER PROGRAMMER CURRICULUM

APOGEE Systems **APOGEE with BACnet systems**
 5-620* 5-720
 5-625 5-725
 5-630 5-630
 5-635 5-635

*For experienced operators, we offer a web-based tool to test your knowledge of the information taught in the APOGEE Workstation Operations course (5-620). If you successfully complete the test, then you may attend any class that requires 5-620 as a prerequisite and you have met the 5-620 requirement for a plaque. Log on to our training website: www.siemens.com/esonline, if you want more information or would like to take the test.

5-615 APOGEE Field Panel and FLN Operations (4 days)

Learn to monitor and control building systems locally from field panels and FLN devices using Datamate Base. Insight workstations are used to monitor and command FLN devices.

TOPIC:	YOU WILL LEARN TO:
Hardware	<ul style="list-style-type: none">Identify and network Automation Level Network (ALN) Building Level Network (BLN) and Field Level Network (FLN) devices.
Datamate Base	<ul style="list-style-type: none">Perform database backup and restoration for BLN and FLN devices.Communicate with ALN/BLN and FLN devices.
Point Operations	<ul style="list-style-type: none">Use Point Monitor, Point Log and Subpoint Log to display point information.Command points at the ALN/BLN and FLN levels.Describe point addressing schemes for ALN/BLN and FLN devices.
FLN Device Applications	<ul style="list-style-type: none">Analyze the sequence of operations for VAV, Constant Volume, Heat Pump and Unit Ventilator applications.
FLN Device Operations	<ul style="list-style-type: none">Command and monitor subpoints at TEC and Field Panels.Display FLN information at the field panel.Use an Insight workstation to command and release subpoints.Run reports at the Insight workstation to view subpoints.
TEC Communications and Startup	<ul style="list-style-type: none">Identify and describe the function of and interaction between the different memory types in TECs.Identify the three types of subpoints in TECs.
Automation Level Network/ Building Level Network	<ul style="list-style-type: none">Describe DDC networking concepts.Interpret LED indicator action.

NOTE: This course includes Insight FLN operations and additional FLN device applications. The training uses both Insight and Datamate Base software.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

System users who need skills to control and monitor building control systems from Field Panels and terminal equipment controllers.

PREREQUISITE:

APOGEE Workstation Operations (5-620) or APOGEE with BACnet for Experienced Insight Users (5-710) or APOGEE with BACnet Advanced Operations (5-720).

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)



“I feel I gained a better understanding of how the system operates and how I can work within the system.”

Jean-Louis Henriot
Glenbrook High School
School District 225

5-620 APOGEE Workstation Operations (4 days)

Learn to monitor and control your building automation system using your APOGEE workstation.

TEST-OUT:

For experienced operators, we offer a web-based tool to test your knowledge of the information taught in this class. For more details or to launch the test-out, please visit: siemens.com/esonline.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Building operators, maintenance personnel or others who need skills for day-to-day operation of an APOGEE system.

TOPIC:

Distributed Digital Control (DDC)

Navigation

Reports

Report Scheduler

System Profile

Point Editor

Alarm Management

Commander

Graphics

Trend

Equipment Scheduler

Dynamic Plotter

YOU WILL LEARN TO:

- Define DDC and explain how it is used to control building systems.

- Navigate through Windows and Insight.
- Use the Object Selector to retrieve objects from the database.
- Customize the Insight main menu.

- Define and generate APOGEE reports.

- Schedule reports to run automatically.
- Describe the Scheduler application.

- Identify the DDC hardware used to control and monitor building equipment.
- Describe APOGEE system architecture.
- Explain the system profile and its functions.
- Unbundle subpoints in a TEC.

- Address points for the Modular Building Controller (MBC), the Modular Equipment Controller (MEC), the PXC Compact (PXC-C) and the PXC Modular (PXC-M) Field Panels.
- Discuss slope and intercept.
- Define alarms and utilize standard alarms.

- Manage system alarms and alarm messages.

- Monitor and command system points to control building equipment.

- Manage alarms from Graphics.
- Utilize dynamic information in the Graphics application.

- Create trend definitions.
- Collect trend data.

- Schedule events and zones.
- Override scheduled events and zones.

- Generate a dynamic plot to monitor system information.

PREREQUISITE:

It is strongly recommended that participants have some PC experience in order to receive maximum benefit from the training.

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)

“I especially liked the materials and presentation. The course showed a lot of thought and careful planning.”

Jeffrey Capen
Stanford Medical

5-625 APOGEE Advanced Operations (4 days)

Learn to use the advanced features of the APOGEE workstation.

TOPIC:	YOU WILL LEARN TO:
System Architecture	<ul style="list-style-type: none">• Describe the networks used in APOGEE communication.• Use System Profile to edit the system architecture.
Points	<ul style="list-style-type: none">• Create and modify points.• Copy existing points using Attribute Duplicator.• Put points into trend.
User Accounts	<ul style="list-style-type: none">• Create Insight and ALN/BLN user accounts.• Assign privilege levels to user accounts.• Add objects to Access Groups.
Enhanced Alarming	<ul style="list-style-type: none">• Explain the use of Enhanced Alarm Management.• Define destinations and alarm messages.• Modify a point to use Enhanced Alarming.
Graphics	<ul style="list-style-type: none">• Use Micrografx Designer to create background graphics.• Use the Graphics application of Insight to create dynamic graphics.• Create a logical series of links between dynamic graphics.
Event Builder	<ul style="list-style-type: none">• Create a new Zone.• Create a new Event.• Describe Start/Stop Time Optimization (SSTO).
Program Editor	<ul style="list-style-type: none">• Describe features of Program Editor.• Import and save a program.• Describe key features of a program.• Generate reports used in troubleshooting programs.
Scheduler	<ul style="list-style-type: none">• Describe how Scheduler works.• Explain how Scheduler ties zones, events and programs together to automate building controls systems.
Database Utilities	<ul style="list-style-type: none">• Backup and restore the system database.• Use the Database Transfer Application.• Utilize the System Activity Log to track system activity.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Advanced users, managers and APOGEE system administrators who need to create and modify points, graphics, user accounts and zones and events.

PREREQUISITE:

APOGEE Workstation Operations (5-620) or APOGEE with BACnet for Experienced Insight Users (5-710) or APOGEE with BACnet Workstation Operations (5-720).

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)



“The overall flow of the course manual; clearly written and well illustrated.”

Todd Fredericks
Yukon-Kuskokwim Health Corp.

5-630 APOGEE PPCL Programming (4 days)

Learn to interpret and troubleshoot existing Powers Process Control Language (PPCL) programs from your APOGEE workstation.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Advanced users who need skills to interpret, modify and troubleshoot existing programs.

PREREQUISITE:

APOGEE Workstation Operations (5-620) or Accelerated APOGEE Master Operator Program (5-690) or APOGEE with BACnet for Experienced Insight Users (5-710) or APOGEE with BACnet Workstation Operations (5-720).

TOPIC:

YOU WILL LEARN TO:

PPCL Syntax

- Describe the functions of the various programming statements.
- Use PPCL rules and guidelines.
- Use the five-step problem-solving process to write PPCL programs.

Program Planning and Flowcharts

- Create flowcharts for new and existing programs.

Program Editor

- Describe and use the features of the Program Editor.
- Use various navigational tools in Program Editor.

Troubleshooting

- Use Report Builder to test and troubleshoot programs.

Point Control

- Use conditional and emergency control statements.
- Write a control LOOP to modulate equipment.
- Use a TABLE statement to reset values.
- Use a dead band for cycling equipment on and off.

FLN Devices

- Write PPCL code to command FLN devices.

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)



“I feel much more confident in reading and making adjustments to programs after taking this course.”

Marco Crisci

Metropolitan Washington
Dulles Airport

5-635 APOGEE Programming for Efficient Building Operations (4 days)

Explore multiple high-level strategies designed to optimize building performance and reduce energy costs.

TOPIC:	YOU WILL LEARN TO:
Equipment Ramping	<ul style="list-style-type: none"> Change programs to minimize overshoot during startup.
Equipment Rotation	<ul style="list-style-type: none"> Modify programs to automatically rotate equipment based on a schedule or run time.
Equipment Staging	<ul style="list-style-type: none"> Alter programs to ensure the proper number of devices are operating at any given time.
Cascading Loops	<ul style="list-style-type: none"> Use the output of a loop statement to modify the setpoint in another loop.
Loop Tuning	<ul style="list-style-type: none"> Adjust loop gains to ensure efficient equipment performance.
Adaptive Control	<ul style="list-style-type: none"> Modify an existing program to use the Adaptive Loop Control.
Enthalpy Optimization	<ul style="list-style-type: none"> Add programming code to determine the optimum position of the outside air dampers based on a given set of conditions.
Peak Demand Limiting (PDL)	<ul style="list-style-type: none"> Change programs to prevent exceeding peak energy consumption limits by properly cycling equipment.
Start/Stop Time Optimization (SSTO)	<ul style="list-style-type: none"> Build an optimized zone.
VAV Control	<ul style="list-style-type: none"> Design a program to control a variable volume air handler.

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Advanced users who need skills to create or modify programs using advanced program control strategies for energy efficiency.

PREREQUISITES:

APOGEE Workstation Operations (5-620) or Accelerated APOGEE Master Operator Program (5-690) or APOGEE with BACnet for Experienced Insight Users (5-710), or APOGEE with BACnet Workstation Operations (5-720) and APOGEE PPCL Programming (5-630).



“I will use the material I learned as soon as I get back!”

Jose L. Vega Jr.
St. Lucie County
School District

5-652 InfoCenter Suite (3 days)

Learn to archive, manage and retrieve large amounts of building automation system data for validation compliance and management reporting.

COURSE LENGTH:

Three days ending by 4:30 p.m. on the third day.

PARTICIPANTS:

Individuals who will administer the data collected by an APOGEE system using InfoCenter Suite software.

TOPIC:

System Architecture

YOU WILL LEARN TO:

- Explain how InfoCenter data is generated by an APOGEE system.
- Explain data flow in InfoCenter.
- Describe the different volume types and their functions.

InfoCenter Administrator

- Mount and dismount volumes.
- Create new volumes.
- Create point groups.
- Setup point group security.
- Annotate and modify point values.

InfoCenter Points

- Identify the different point types and their properties.

InfoCenter Data

- Import and export system data.
- Dynamically import data from Insight: Trend, Alarm, System Activity Log, Alarm Issue Management (AIM) and Compliance Support Option (CSO).
- Archive and purge system data.

InfoCenter Report Manager

- Create customized reports from report templates.
- Run reports manually or by schedule.

PREREQUISITE:

It is strongly recommended that participants take APOGEE Workstation Operations (5-620) or Accelerated APOGEE Master Operator Program (5-690) or APOGEE with BACnet for Experienced Insight Users (5-710) or APOGEE with BACnet Workstation Operations (5-720) and have some PC experience in order to receive maximum benefit from the training.

CEUs:

2.3 CEUs

PRICE:

\$1,995 (U.S.)



5-670 APOGEE Laboratory Controls (4 days)

Learn to monitor and control laboratory spaces using the APOGEE building automation system. This class includes hands-on exercises using full-size fume hoods in a laboratory set-up.

TOPIC:	YOU WILL LEARN TO:
Overview	<ul style="list-style-type: none">• Define the purpose of a Fume Hood.• Identify components of a Fume Hood.• Identify Siemens Fume Hood Controls.
Fume Hood Control Strategy	<ul style="list-style-type: none">• Describe the function of the Fume Hood Controller (FHC).• Identify components of the Fume Hood Exhaust Terminal.• Interpret the readings on an Operator Display Panel.• Learn the sequence of operation for various FHCs.
Lab Room Control Strategy	<ul style="list-style-type: none">• Describe the operation of a Lab and Pressurized Room Controller with Off-Board Air Velocity Sensor (LCM-OAVS).• Describe how a LCM-OAVS controls room pressurization, ventilation, and temperature.• Monitor and command subpoints of a LCM-OAVS.
Room Pressurization Control and Monitoring	<ul style="list-style-type: none">• Describe the sequence of operation for Room Pressurization Control.• Describe the sequence of operation of the Differential Pressure Monitor and Room Pressure Monitor.
Accessing Information	<ul style="list-style-type: none">• Use the Insight workstation to monitor and command subpoints.• Use Datamate Base to access controller information locally.• Setup points for trend.
Compliance Support Option (CSO)	<ul style="list-style-type: none">• Setup points as supervised points.• Identify which points are supervised.

PREREQUISITE:

APOGEE Workstation Operations (5-620) or Accelerated APOGEE Master Operator Program (5-690) or APOGEE with BACnet for Experienced Insight Users (5-710) or APOGEE with BACnet Workstation Operations (5-720).

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)

COURSE LENGTH:

Four days ending by noon on the fourth day.

LOCATION:

This class is only offered at our training center located in Buffalo Grove, Illinois.

PARTICIPANTS:

Advanced users who need skills to monitor laboratory controls.



5-690 Accelerated APOGEE Master Operator Program (9 days)

Learn to use the APOGEE workstation, field panels and FLN devices to control a building. This course includes both the Insight and Datamate Base software. This is an accelerated training program that contains all information presented in the 5-620, 5-625 and 5-615 courses taught on two consecutive weeks. Classes include extensive hands-on labs.

COURSE LENGTH:

Nine days ending by noon on the ninth day. The schedule is Tuesday through Friday (8:00 a.m. – 4:30 p.m.) of week one and Monday through Thursday (8:00 a.m. – 4:30 p.m.) and Friday (8:00 a.m. – noon) of week two.

PARTICIPANTS:

Experienced computer and HVAC system operators who need to control and/or monitor building systems from the Insight computer workstation, field panels or FLN devices.

PREREQUISITE:

It is strongly recommended that the participants have several years of computer experience and a strong knowledge of HVAC systems before attending this class.

CEUs:

6.4 CEUs

PRICE:

\$4,130 (U.S.)

NOTE: This class is taught at a rapid pace with large amounts of new information presented each day. Students who complete every day of this class will receive the Master Operator Curriculum plaque.

The topics from the three classes will be taught in the following order.

TOPIC:	SEE COURSE DESCRIPTION FOR DETAILS:
Distributed Digital Control (DDC)	5-620
Navigation (Windows and Insight)	5-620
Reports (Report Builder and Report Viewer)	5-620
System Architecture and Hardware	5-615, 5-620, 5-625
System Profile	5-620, 5-625
Point Editor and Attribute Duplicator	5-620, 5-625
Alarm Management and Enhanced Alarming	5-620, 5-625
Commander and Global Commander	5-620
Micrografx Designer and Graphics	5-620, 5-625
Event Builder	5-625
Trending	5-620
Reports, Trend Collections and Equipment Scheduling	5-620, 5-625
Dynamic Plotter	5-620
User Accounts	5-625
Program Editor	5-625
Database Utilities	5-625
Datamate Base	5-615
Point Operations	5-615
FLN Device Applications	5-615
FLN Device Operations	5-615
TEC Communications and Startup	5-615
Building Level Network	5-615

5-710 APOGEE with BACnet® for Experienced Insight Users (4 days)

Learn to monitor and control your building with an APOGEE with BACnet workstation.

TOPIC:

YOU WILL LEARN TO:

BACnet Overview

- Describe how BACnet stores information in Objects and Priorities.
- Describe how BACnet uses the Who-Is/I-Am and Who-Has/ I-Have services.
- Explain how BACnet services are used to request and write information between devices.

System Architecture

- Identify components of a BACnet network.
- Identify different network technologies used in BACnet.

BACnet Field Panel

- Explain the differences between proprietary and BACnet systems.
- Describe BACnet field panel configuration settings.
- Describe a BACnet Broadcast Management Device (BBMD).

System Profile

- Build a BACnet BLN.
- Configure a Siemens BACnet field panel.
- Discuss the BACnet-related functions of the System Profile application.

BACnet TECs

- Add a BACnet TEC to an MS/TP FLN.
- Discuss the requirements of a BACnet MS/TP FLN.

BACnet Database Operations

- Create BACnet points.
- Set and relinquish BACnet points.
- Configure User Accounts for BACnet accessibility.
- Use the BACnet Object Browser (BOB) to view and modify properties in BACnet devices.

BACnet Alarms

- Define alarm properties for BACnet points.
- Create BACnet alarm messages.
- Build BACnet notification classes.

BACnet Trending

- Trend BACnet points.
- Collect BACnet trend data.

BACnet Scheduling

- Explain BACnet Calendars and Schedules.
- Create BACnet Command Objects.
- Build BACnet schedules using BACnet calendars and command objects.

PREREQUISITES:

APOGEE Workstation Operations (5-620) and APOGEE Advanced Operations (5-625).

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

It is strongly recommended that students have advanced APOGEE skills before taking this fast-paced BACnet course. For those with moderate skills or who are new to APOGEE systems, it is recommended they attend 5-720 and the 5-725 classes to receive maximum benefit from the training.

“I was concerned about BACnet integration but the course alleviated all my fears.”

John McDaniel
Princeton University



5-720 APOGEE with BACnet® Workstation Operations (4 days)

Learn to monitor and control building automation systems using an APOGEE with BACnet system.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Building operators, maintenance personnel or others who need skills for day-to-day operation of an APOGEE with BACnet system.



TOPIC:

Distributed Digital Control (DDC)

YOU WILL LEARN TO:

- Define DDC and explain how it is used to control building systems.
- Identify the DDC hardware used to control and monitor building equipment.
- Describe APOGEE system architecture.

Navigation

- Navigate through Windows and Insight.
- Use the Object Selector to retrieve objects from the database.
- Customize the Insight main menu.

Reports

- Define and generate APOGEE reports.

Scheduler

- Schedule reports to run automatically.
- Describe the scheduler application.
- Add BACnet Calendars and Schedules.
- Add an Exception to a BACnet Schedule.

System Profile

- Explain the system tree and its functions.
- Unbundle subpoints in a TEC.

Point Editor

- Modify point definitions.
- Address points in APOGEE Field Panel controllers

Alarm Management

- Manage system alarms.

Commander

- Monitor and command system points to control building equipment.

Graphics

- Manage alarms from graphics.
- Utilize dynamic information in the Graphics application.

Trend

- Create trend definitions.
- Collect trend data.

Dynamic Plotter

- Generate a dynamic plot to monitor system information.

PREREQUISITE:

It is strongly recommended that participants have previous PC experience in order to receive maximum benefit from the training.

CEUs:

2.7 CEUs

PRICE:

\$1,995 (U.S.)

“I especially liked the pace at which training was held; there was no question unanswered.”

Julio A. Diaz
Barry University

5-725 APOGEE with BACnet® Advanced Operations (4 days)

Learn to use the advanced features of the APOGEE with BACnet workstation.

TOPIC:	YOU WILL LEARN TO:
System Architecture	<ul style="list-style-type: none"> Describe the networks used in APOGEE communication. Use System Profile to edit the system architecture. Describe the BACnet Command Priority Array.
Points	<ul style="list-style-type: none"> Create and modify points. Copy existing points using Attribute Duplicator. Put points into trend.
User Accounts	<ul style="list-style-type: none"> Create Insight and ALN/BLN user accounts. Assign privilege levels to user accounts. Add objects to Access Groups. Assign BACnet Command Priority privileges.
Graphics	<ul style="list-style-type: none"> Use Micrografx Designer to create background graphics. Use the Graphics application of Insight to create dynamic graphics. Create a logical series of links between dynamic graphics.
Event Builder	<ul style="list-style-type: none"> Create a BACnet Command object.
Program Editor	<ul style="list-style-type: none"> Describe features of Program Editor. Import and save a program. Describe key features of a program. Generate reports used in troubleshooting programs.
Scheduler	<ul style="list-style-type: none"> Describe how Scheduler works. Use BACnet scheduling to add a new Calendar and Schedule.
Database Utilities	<ul style="list-style-type: none"> Backup and restore the system database. Use the Database Transfer application. Utilize the System Activity Log to track system activity.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Advanced users, managers and APOGEE with BACnet system administrators who need to create and modify points, graphics, user accounts, schedules and calendars.

PREREQUISITE:

APOGEE with BACnet Workstation Operations (5-720)

CEUS:

2.7 CEUs

PRICE:

\$1,995 (U.S.)



5-900 Advanced APOGEE for Master Operators

This class is intended for experience APOGEE Insight users who have achieved recognition by Siemens Industry, Inc. as a Master Operator through the Master training path. Participants will utilize the APOGEE Insight software to learn how to access and implement strategies not presented during the normal training path.

COURSE LENGTH:

Two and a half days.

PARTICIPANTS:

System users who need additional skills operating and maintaining the system.

PREREQUISITES:

To receive the Master Operator status, student must take 5-620, 5-625 and 5-615 or 5-690.

CEUs:

1.9 CEUs

PRICE:

\$1,895 (U.S.)

TOPIC:

YOU WILL LEARN TO:

Insight Services

- Describe the Insight Services and their functions.

Sentinel Licensing

- Describe the Insight Sentinel application.
- Use WLAdmin to determine Insight Permissions and User licenses.

Insight Options

- Compliance Support Option.
- Alarm Issue Management.
- Enhanced Graphics Feature.

Insight PC and Field Panel Database Maintenance

- Perform Database Defragmentation for the PC and the Field Panel.
- Backup and restore the Insight Database.
- Backup the Field Panel database through MMI Transfer.

Enhancing Alarm

- Use token text strings to create alarm messages for messages using tokens alarmable points.

Sensor Commissioning

- Describe the different types of sensors used in the APOGEE Automation System.
- Correctly wire sensors to a Field Panel.
- Add points to the point database for the sensors added.
- Verify proper point operations.

Terminal Emulation

- Use Telnet to connect to and communicate with the Field Panel.
- Modify the Field Panel settings to place the Field Panel on a network.

Troubleshooting the System

- Discuss network fundamentals for the three APOGEE Networks.
- Troubleshoot communication issues with the three APOGEE Networks.
- Troubleshoot failed points in the database.

Use Insight Reports for Troubleshooting

- Use data displayed for various Insight reports to aid in troubleshooting component and system problems.

NOTE: The above topics are a general guideline of what will be covered in the class. This course will be updated each offering based on the latest information from subject-matter experts and direct feedback from our Master Operators. This course is held at Walt Disney World, FL and includes a visit to Siemens VIP Center, Base21, in Epcot.

For more details on exactly what will be discussed in class, please contact educationservices.industry@siemens.com.



NEW 5-920 Desigo CC Workstation Operations (3 Days)

Learn to monitor and control your building automation system using your Desigo CC workstation.

TOPIC:

Navigation

YOU WILL LEARN TO:

- Log into Windows.
- Launch Desigo CC.
- Log into Desigo CC.
- Navigate the Desigo CC user interface.
- Explain Pane Interactions, Workflow, Application View, and Management View.
- Locate Database Objects in the system browser.
- Access online help.

System Database

- Explain Database Objects and their naming conventions.
- Access Database Points.
- View point information and command points.
- Interact with the system browser.

Trending

- Describe trends.
- Define online and offline trends.
- Put a point into trend.
- Access trends.

Graphics

- Navigate the Graphics Application.
- Utilize dynamic information in the graphics.
- Command points.

Alarm Management

- Use the Summary Bar to monitor events and alarms in the system.
- Treat events.
- Utilize quick and investigative treatment.

Scheduler

- Evaluate calendars, schedules and time triggers.
- Analyze BACnet schedules and calendars.

Reports

- Run standard reports.
- Modify reports.
- Save and access reports via Windows Explorer.

COURSE LENGTH:

Three days ending by
4:30 pm on the last day.

PARTICIPANTS:

Building operators, maintenance personnel or others who need skills for day-to-day facility operations with a Desigo CC workstation.



PREREQUISITE:

It is strongly recommended that participants have some PC experience in order to receive maximum benefit from the training.

CEUs:

2.3 CEUs

PRICE:

\$1,995 (U.S.)



NEW 5-925 Desigo CC Advanced Operations (3 days)

Learn to use the advanced features of the Desigo CC workstation.

TOPIC:

YOU WILL LEARN TO:

Point Operations

- Modify and add points to the system database.
- Access point functions in Desigo CC.

System Database

- Perform search and filter functions using the system browser.
- Explain the application of models and functions on database functions.

User Accounts and Groups

- Create Desigo CC accounts.
- Build Desigo CC groups.
- Allow and restrict access to users and groups (Scope Rights).

Scopes

- Explain the use of scopes.
- Define the use of scopes.

Desigo CC Address Book

- Use the Desigo CC address book.
- Populate the Desigo CC address book.

Advanced Graphics

- Edit Desigo CC graphics.
- Create new graphics.

Working with PPCL

- Open a program.
- Modify a program.
- Save a program.

Scheduling

- Create workstation schedules, calendars and time triggers.
- Create BACnet schedules and calendars.

Database Utilities

- Perform database backup and restore.
- Utilize the system activity report to track system activity from the system journal.

COURSE LENGTH:

Three days ending by 4:30 pm on the last day.

PARTICIPANTS:

Advanced users, managers and system administrators who need to create and modify points, graphics and user accounts.

PREREQUISITE:

Desigo CC Workstation Operations (5-920)

CEUs:

2.3 CEUs

PRICE:

\$1,995 (U.S.)

Class Schedule by Course

To enroll or for details on our classes, log-on to siemens.com/esonline or call 800-487-7771.

START DATE	LOCATION	START DATE	LOCATION	START DATE	LOCATION	START DATE	LOCATION
5-615 APOGEE FIELD PANEL AND FLN OPERATIONS <i>3.5 Days-Starts on a Tuesday</i>		09/17/13	Atlanta, GA	02/12/13	Virginia Beach, VA	05/07/13	Washington, DC
		09/17/13	Florham Park, NJ	02/12/13	Raleigh, NC	05/07/13	Rochester, NY
		09/24/13	Washington, DC	02/19/13	Salt Lake City, UT	05/07/13	Seattle, WA
		10/08/13	Denver, CO	02/19/13	Buffalo Grove, IL	05/07/13	Florham Park, NJ
		10/22/13	Boston, MA	02/26/13	Austin, TX	06/04/13	Atlanta, GA
		10/29/13	Washington, DC	02/26/13	Florham Park, NJ	06/04/13	Philadelphia, PA
		11/05/13	Buffalo Grove, IL	03/05/13	Washington, DC	06/04/13	Washington, DC
		11/19/13	Virginia Beach, VA	03/12/13	Minneapolis, MN	06/11/13	San Antonio, TX
		11/19/13	Seattle, WA	03/12/13	Orlando, FL	06/11/13	Boston, MA
		12/10/13	Anchorage, AK	03/12/13	Portland, OR	06/18/13	Dallas, TX
5-620 APOGEE WORKSTATION OPERATIONS <i>3.5 Days-Starts on a Tuesday</i>		03/26/13	Atlanta, GA	03/26/13	Atlanta, GA	06/25/13	Los Angeles, CA
		04/02/13	Miami, FL	04/02/13	Miami, FL	07/09/13	Washington, DC
		04/02/13	Boston, MA	04/02/13	Boston, MA	07/09/13	San Francisco, CA
		04/02/13	San Francisco, CA	04/02/13	San Francisco, CA	07/16/13	Philadelphia, PA
		04/02/13	Seattle, WA	04/02/13	Seattle, WA	07/16/13	San Diego, CA
		04/09/13	Washington, DC	04/09/13	Washington, DC	07/16/13	Seattle, WA
		04/16/13	Detroit, MI	04/16/13	Detroit, MI	07/23/13	Boston, MA
		04/16/13	Omaha, NE	04/16/13	Omaha, NE	08/06/13	Florham Park, NJ
		04/16/13	San Diego, CA	04/16/13	San Diego, CA	08/13/13	Washington, DC
		04/16/13	Las Vegas, NV	04/16/13	Las Vegas, NV	08/20/13	Buffalo Grove, IL
04/23/13	Philadelphia, PA	04/23/13	Philadelphia, PA	09/10/13	Atlanta, GA		
04/23/13	Buffalo Grove, IL	04/23/13	Buffalo Grove, IL	09/10/13	Philadelphia, PA		
04/30/13	St. Louis, MO	04/30/13	St. Louis, MO	09/10/13	Harrisburg, PA		
04/30/13	Toronto, ON	04/30/13	Toronto, ON	09/17/13	Minneapolis, MN		
04/30/13	Eugene, OR	04/30/13	Eugene, OR	09/17/13	Washington, DC		
05/07/13	Cincinnati, OH	05/07/13	Cincinnati, OH	09/17/13	Spokane, WA		
05/07/13	Denver, CO	05/07/13	Denver, CO	09/24/13	Orlando, FL		
05/07/13	Toronto, ON	05/07/13	Toronto, ON	09/24/13	Dallas, TX		
10/02/12	San Francisco, CA	10/02/12	San Francisco, CA	10/02/12	San Francisco, CA		
10/09/12	Boston, MA	10/09/12	Boston, MA	10/09/12	Boston, MA		
10/09/12	Washington, DC	10/09/12	Washington, DC	10/09/12	Washington, DC		
10/16/12	Orlando, FL	10/16/12	Orlando, FL	10/16/12	Orlando, FL		
10/16/12	Dallas, TX	10/16/12	Dallas, TX	10/16/12	Dallas, TX		
10/23/12	Omaha, NE	10/23/12	Omaha, NE	10/23/12	Omaha, NE		
10/23/12	Anchorage, AK	10/23/12	Anchorage, AK	10/23/12	Anchorage, AK		
11/06/12	Atlanta, GA	11/06/12	Atlanta, GA	11/06/12	Atlanta, GA		
11/06/12	New Orleans, LA	11/06/12	New Orleans, LA	11/06/12	New Orleans, LA		
11/06/12	Toronto, ON	11/06/12	Toronto, ON	11/06/12	Toronto, ON		
11/06/12	Washington, DC	11/06/12	Washington, DC	11/06/12	Washington, DC		
11/13/12	Miami, FL	11/13/12	Miami, FL	11/13/12	Miami, FL		
11/13/12	Boston, MA	11/13/12	Boston, MA	11/13/12	Boston, MA		
11/13/12	Philadelphia, PA	11/13/12	Philadelphia, PA	11/13/12	Philadelphia, PA		
11/13/12	Buffalo Grove, IL	11/13/12	Buffalo Grove, IL	11/13/12	Buffalo Grove, IL		
12/04/12	San Diego, CA	12/04/12	San Diego, CA	12/04/12	San Diego, CA		
12/11/12	Philadelphia, PA	12/11/12	Philadelphia, PA	12/11/12	Philadelphia, PA		
12/11/12	Los Angeles, CA	12/11/12	Los Angeles, CA	12/11/12	Los Angeles, CA		
12/11/12	Florham Park, NJ	12/11/12	Florham Park, NJ	12/11/12	Florham Park, NJ		
01/08/13	Dallas, TX	01/08/13	Dallas, TX	01/08/13	Dallas, TX		
01/08/13	Boston, MA	01/08/13	Boston, MA	01/08/13	Boston, MA		
01/08/13	Philadelphia, PA	01/08/13	Philadelphia, PA	01/08/13	Philadelphia, PA		
01/08/13	San Diego, CA	01/08/13	San Diego, CA	01/08/13	San Diego, CA		
01/08/13	Seattle, WA	01/08/13	Seattle, WA	01/08/13	Seattle, WA		
01/15/13	Washington, DC	01/15/13	Washington, DC	01/15/13	Washington, DC		
01/15/13	Anchorage, AK	01/15/13	Anchorage, AK	01/15/13	Anchorage, AK		
01/29/13	San Francisco, CA	01/29/13	San Francisco, CA	01/29/13	San Francisco, CA		
02/05/13	Denver, CO	02/05/13	Denver, CO	02/05/13	Denver, CO		
02/05/13	Philadelphia, PA	02/05/13	Philadelphia, PA	02/05/13	Philadelphia, PA		
02/05/13	Los Angeles, CA	02/05/13	Los Angeles, CA	02/05/13	Los Angeles, CA		
02/12/13	Boston, MA	02/12/13	Boston, MA	02/12/13	Boston, MA		



START DATE LOCATION START DATE LOCATION START DATE LOCATION START DATE LOCATION



09/24/13 Houston, TX
 09/24/13 Los Angeles, CA
 09/24/13 Seattle, WA
 10/01/13 Boston, MA
 10/08/13 Miami, FL
 10/08/13 Raleigh, NC
 10/15/13 Philadelphia, PA
 10/15/13 Washington, DC
 10/22/13 San Diego, CA
 10/22/13 Anchorage, AK
 11/05/13 New Orleans, LA
 11/05/13 Rochester, NY
 11/05/13 Los Angeles, CA
 11/05/13 Salt Lake City, UT
 11/12/13 San Francisco, CA
 11/12/13 Buffalo Grove, IL
 11/12/13 Florham Park, NJ
 11/19/13 Austin, TX
 12/03/13 Boston, MA
 12/03/13 Philadelphia, PA
 12/10/13 Atlanta, GA
 12/10/13 San Antonio, TX
 12/10/13 Washington, DC

**5-625 APOGEE
 ADVANCED
 OPERATIONS**
3.5 Days-Starts on a Tuesday

10/09/12 Cincinnati, OH
 10/09/12 Raleigh, NC
 10/16/12 San Diego, CA
 10/23/12 Washington, DC
 10/30/12 Boston, MA
 10/30/12 Los Angeles, CA
 11/06/12 San Antonio, TX
 11/06/12 Rochester, NY
 11/13/12 Florham Park, NJ
 12/04/12 Philadelphia, PA
 12/11/12 Buffalo Grove, IL
 01/29/13 Orlando, FL
 02/12/13 Harrisburg, PA
 02/12/13 Los Angeles, CA
 02/19/13 Washington, DC
 02/19/13 Anchorage, AK
 02/26/13 Seattle, WA
 03/05/13 Philadelphia, PA

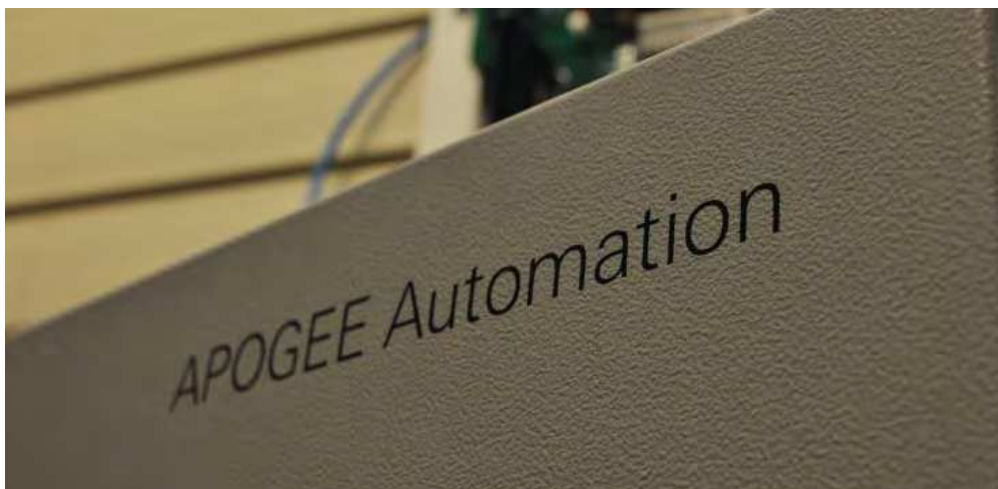
03/05/13 Raleigh, NC
 03/12/13 San Diego, CA
 03/12/13 Buffalo Grove, IL
 03/12/13 Florham Park, NJ
 03/19/13 Dallas, TX
 03/19/13 San Francisco, CA
 03/26/13 New Orleans, LA
 04/09/13 Atlanta, GA
 04/22/13 Boston, MA
 05/14/13 Detroit, MI
 05/14/13 Houston, TX
 05/14/13 Philadelphia, PA
 05/14/13 Salt Lake City, UT
 05/21/13 Austin, TX
 05/21/13 Washington, DC
 06/04/13 Portland, OR
 06/11/13 San Diego, CA
 06/11/13 Buffalo Grove, IL
 06/18/13 Miami, FL
 06/18/13 San Francisco, CA
 07/23/13 Washington, DC
 07/23/13 Eugene, OR
 08/06/13 Los Angeles, CA
 08/13/13 Denver, CO
 08/13/13 Philadelphia, PA
 08/20/13 Seattle, WA
 09/10/13 Virginia Beach, VA
 09/10/13 Washington, DC
 09/17/13 San Antonio, TX
 09/17/13 Rochester, NY
 09/17/13 San Francisco, CA
 09/17/13 Buffalo Grove, IL
 09/24/13 Philadelphia, PA
 10/01/13 Orlando, FL
 10/01/13 Harrisburg, PA
 10/08/13 Atlanta, GA
 10/15/13 Dallas, TX
 10/15/13 Las Vegas, NV
 10/22/13 Minneapolis, MN
 11/12/13 Raleigh, NC
 11/19/13 Boston, MA
 11/19/13 San Diego, CA
 12/03/13 Buffalo Grove, IL
 12/03/13 Florham Park, NJ
 12/10/13 Philadelphia, PA

**5-635 APOGEE
 PROGRAMMING FOR
 EFFICIENT BUILDING
 OPERATIONS**
3.5 Days-Starts on a Tuesday

10/02/12 Buffalo Grove, IL
 10/09/12 Los Angeles, CA
 10/09/12 Seattle, WA
 11/13/12 St. Louis, MO
 01/29/13 Washington, DC
 02/05/13 San Diego, CA
 02/12/13 Rochester, NY
 02/26/13 Boston, MA
 03/05/13 San Francisco, CA
 03/19/13 Philadelphia, PA
 03/19/13 Anchorage, AK
 04/09/13 Los Angeles, CA
 04/16/13 Buffalo Grove, IL
 04/23/13 Cincinnati, OH
 05/14/13 Orlando, FL
 05/21/13 Atlanta, GA
 05/21/13 Miami, FL
 06/11/13 Harrisburg, PA
 06/18/13 Boston, MA
 07/23/13 San Diego, CA
 08/13/13 St. Louis, MO
 08/13/13 Dallas, TX
 08/20/13 Philadelphia, PA
 09/10/13 New Orleans, LA
 10/01/13 Los Angeles, CA
 10/08/13 Buffalo Grove, IL
 10/15/13 Seattle, WA
 10/15/13 Florham Park, NJ
 10/02/12 Philadelphia, PA
 10/09/12 Buffalo Grove, IL
 10/16/12 Atlanta, GA
 12/04/12 Seattle, WA
 03/12/13 Boston, MA
 03/19/13 Washington, DC
 04/02/13 Florham Park, NJ
 04/09/13 Philadelphia, PA
 05/14/13 Anchorage, AK
 06/04/13 Los Angeles, CA
 06/11/13 Cincinnati, OH
 06/18/13 Buffalo Grove, IL
 08/06/13 San Diego, CA
 08/13/13 Orlando, FL
 10/08/13 Philadelphia, PA
 10/15/13 Atlanta, GA

**5-630 APOGEE
 PPCL PROGRAMMING**
3.5 Days-Starts on a Tuesday

START DATE	LOCATION	START DATE	LOCATION	START DATE	LOCATION	START DATE	LOCATION
10/15/13	San Francisco, CA	5-710 APOGEE WITH BACNET FOR EXPERIENCED INSIGHT USERS <i>3.5 Days-Starts on a Tuesday</i>		03/26/13	Seattle, WA	10/22/13	Philadelphia, PA
10/29/13	Buffalo Grove, IL			04/16/13	Anchorage, AK	10/29/13	Orlando, FL
11/05/13	St. Louis, MO			04/23/13	Dallas, TX	11/19/13	Atlanta, GA
11/05/13	Harrisburg, PA			04/23/13	San Diego, CA	5-900 ADVANCED APOGEE FOR MASTER OPERATORS <i>2.5 Days-Starts on a Tuesday</i>	
11/12/13	Miami, FL			05/14/13	Washington, DC		
11/19/13	Dallas, TX			05/21/13	Virginia Beach, VA		
12/03/13	Seattle, WA			06/11/13	Detroit, MI		
5-652 INFOCENTER SUITE <i>3 Days-Starts on a Tuesday</i>				06/11/13	Seattle, WA		
				06/18/13	Denver, CO		
				07/09/13	Buffalo Grove, IL		
		07/23/13	Atlanta, GA				
		07/30/13	Orlando, FL				
		09/10/13	Miami, FL				
		09/10/13	Boston, MA				
		12/03/13	Los Angeles, CA				
		10/23/12	Raleigh, NC	5-725 APOGEE WITH BACNET ADVANCED OPERATIONS <i>3.5 Days-Starts on a Tuesday</i>		11/06/12	Buffalo Grove, IL
		02/12/13	Washington, DC			01/15/13	Miami, FL
04/16/13	Boston, MA	05/07/13	Philadelphia, PA				
04/30/13	Buffalo Grove, IL	05/07/13	Buffalo Grove, IL				
05/14/13	Philadelphia, PA	06/04/13	Boston, MA				
06/25/13	Florham Park, NJ	07/09/13	Miami, FL				
5-670 APOGEE LABORATORY CONTROLS <i>3.5 Days-Starts on a Tuesday</i>		07/23/13	Los Angeles, CA				
		07/30/13	San Diego, CA				
		08/06/13	San Francisco, CA				
		09/17/13	Virginia Beach, VA				
		10/02/12	Buffalo Grove, IL	08/20/13	Washington, DC		
		10/30/12	Virginia Beach, VA	08/20/13	Washington, DC		
		12/11/12	San Francisco, CA	09/24/13	Las Vegas, NV		
		01/15/13	Buffalo Grove, IL	10/01/13	Buffalo Grove, IL		
		01/29/13	Atlanta, GA				
		02/12/13	Las Vegas, NV				
5-690 ACCELERATED APOGEE MASTER OPERATOR PROGRAM <i>8.5 Days-Starts on a Tuesday</i>		5-720 APOGEE WITH BACNET WORKSTATION OPERATIONS <i>3.5 Days-Starts on a Tuesday</i>		02/19/13	Miami, FL		
				02/26/13	Washington, DC		
				03/05/13	Boston, MA		
				03/19/13	Los Angeles, CA		
				04/30/13	Buffalo Grove, IL		
				12/10/13	Buffalo Grove, IL		



Class Schedule by Location

To enroll or for details on our classes, log-on to siemens.com/esonline or call 800-487-7771.

DATE COURSE TITLE

ANCHORAGE, AK

10/23/12	5-620	APOGEE Workstation Operations
12/11/12	5-615	APOGEE Field Panel and FLN Operations
01/15/13	5-620	APOGEE Workstation Operations
01/29/13	5-710	APOGEE with BACnet for Experienced Insight Users
02/19/13	5-625	APOGEE Advanced Operations
03/19/13	5-630	APOGEE PPCL Programming
04/16/13	5-720	APOGEE with BACnet Workstation Operations
05/14/13	5-635	APOGEE Programming for Efficient Building Operations
10/22/13	5-620	APOGEE Workstation Operations
12/10/13	5-615	APOGEE Field Panel and FLN Operations

DATE COURSE TITLE

10/15/13	5-635	APOGEE Programming for Efficient Building Operations
11/19/13	5-725	APOGEE with BACnet Advanced Operations
12/10/13	5-620	APOGEE Workstation Operations

AUSTIN, TX

02/26/13	5-620	APOGEE Workstation Operations
05/21/13	5-625	APOGEE Advanced Operations
08/06/13	5-615	APOGEE Field Panel and FLN Operations
11/19/13	5-620	APOGEE Workstation Operations

BOSTON, MA

10/09/12	5-620	APOGEE Workstation Operations
10/16/12	5-615	APOGEE Field Panel and FLN Operations
10/30/12	5-625	APOGEE Advanced Operations
11/13/12	5-620	APOGEE Workstation Operations
01/08/13	5-620	APOGEE Workstation Operations
01/29/13	5-710	APOGEE with BACnet for Experienced Insight Users
02/12/13	5-620	APOGEE Workstation Operations
02/26/13	5-630	APOGEE PPCL Programming
03/05/13	5-720	APOGEE with BACnet Workstation Operations
03/12/13	5-635	APOGEE Programming for Efficient Building Operations
04/02/13	5-620	APOGEE Workstation Operations
04/16/13	5-652	InfoCenter Suite
04/22/13	5-625	APOGEE Advanced Operations
05/14/13	5-615	APOGEE Field Panel and FLN Operations
06/04/13	5-725	APOGEE with BACnet Advanced Operations
06/11/13	5-620	APOGEE Workstation Operations
06/18/13	5-630	APOGEE PPCL Programming
07/23/13	5-620	APOGEE Workstation Operations
09/10/13	5-720	APOGEE with BACnet Workstation Operations
10/01/13	5-620	APOGEE Workstation Operations
10/22/13	5-615	APOGEE Field Panel and FLN Operations
11/19/13	5-625	APOGEE Advanced Operations
12/03/13	5-620	APOGEE Workstation Operations

ATLANTA, GA

10/16/12	5-635	APOGEE Programming for Efficient Building Operations
11/06/12	5-620	APOGEE Workstation Operations
01/29/13	5-720	APOGEE with BACnet Workstation Operations
02/19/13	5-615	APOGEE Field Panel and FLN Operations
03/26/13	5-620	APOGEE Workstation Operations
04/09/13	5-625	APOGEE Advanced Operations
05/21/13	5-630	APOGEE PPCL Programming
06/04/13	5-620	APOGEE Workstation Operations
07/23/13	5-720	APOGEE with BACnet Workstation Operations
09/10/13	5-620	APOGEE Workstation Operations
09/17/13	5-615	APOGEE Field Panel and FLN Operations
10/08/13	5-625	APOGEE Advanced Operations

BUFFALO GROVE, IL

10/02/12	5-630	APOGEE PPCL Programming
10/02/12	5-720	APOGEE with BACnet Workstation Operations
10/09/12	5-635	APOGEE Programming for Efficient Building Operations
10/23/12	5-615	APOGEE Field Panel and FLN Operations



DATE	COURSE	TITLE	DATE	COURSE	TITLE
11/06/12	5-725	APOGEE with BACnet Advanced Operations	08/13/13	5-630	APOGEE PPCL Programming
11/13/12	5-620	APOGEE Workstation Operations	09/24/13	5-620	APOGEE Workstation Operations
12/04/12	5-710	APOGEE with BACnet for Experienced Insight Users	10/15/13	5-625	APOGEE Advanced Operations
12/11/12	5-625	APOGEE Advanced Operations	11/19/13	5-635	APOGEE Programming for Efficient Building Operations
01/15/13	5-720	APOGEE with BACnet Workstation Operations	DENVER, CO		
02/19/13	5-620	APOGEE Workstation Operations	10/02/12	5-615	APOGEE Field Panel and FLN Operations
03/05/13	5-615	APOGEE Field Panel and FLN Operations	02/05/13	5-620	APOGEE Workstation Operations
03/12/13	5-625	APOGEE Advanced Operations	05/07/13	5-620	APOGEE Workstation Operations
04/02/13	5-690	Accelerated APOGEE Master Operator Program	06/18/13	5-720	APOGEE with BACnet Workstation Operations
04/16/13	5-630	APOGEE PPCL Programming	08/13/13	5-625	APOGEE Advanced Operations
04/23/13	5-620	APOGEE Workstation Operations	10/08/13	5-615	APOGEE Field Panel and FLN Operations
04/30/13	5-652	InfoCenter Suite	DETROIT, MI		
04/30/13	5-670	APOGEE Laboratory Controls	10/23/12	5-710	APOGEE with BACnet for Experienced Insight Users
05/07/13	5-725	APOGEE with BACnet Advanced Operations	04/16/13	5-620	APOGEE Workstation Operations
06/04/13	5-710	APOGEE with BACnet for Experienced Insight Users	05/13/13	5-625	APOGEE Advanced Operations
06/11/13	5-625	APOGEE Advanced Operations	06/11/13	5-720	APOGEE with BACnet Workstation Operations
06/18/13	5-635	APOGEE Programming for Efficient Building Operations	EUGENE, OR		
07/09/13	5-720	APOGEE with BACnet Workstation Operations	04/30/13	5-620	APOGEE Workstation Operations
07/16/13	5-615	APOGEE Field Panel and FLN Operations	07/23/13	5-625	APOGEE Advanced Operations
08/06/13	5-690	Accelerated APOGEE Master Operator Program	FLORHAM PARK, NJ		
08/20/13	5-620	APOGEE Workstation Operations	11/13/12	5-625	APOGEE Advanced Operations
09/17/13	5-625	APOGEE Advanced Operations	12/11/12	5-620	APOGEE Workstation Operations
10/01/13	5-725	APOGEE with BACnet Advanced Operations	01/15/13	5-615	APOGEE Field Panel and FLN Operations
10/08/13	5-630	APOGEE PPCL Programming	02/26/13	5-620	APOGEE Workstation Operations
10/29/13	5-635	APOGEE Programming for Efficient Bldg. Operations	03/12/13	5-625	APOGEE Advanced Operations
11/05/13	5-615	APOGEE Field Panel and FLN Operations	04/02/13	5-635	APOGEE Programming for Efficient Building Operations
11/12/13	5-620	APOGEE Workstation Operations	05/07/13	5-620	APOGEE Workstation Operations
12/03/13	5-625	APOGEE Advanced Operations	06/25/13	5-652	InfoCenter Suite
12/10/13	5-670	APOGEE Laboratory Controls	08/06/13	5-620	APOGEE Workstation Operations
CINCINNATI, OH			09/17/13	5-615	APOGEE Field Panel and FLN Operations
10/09/12	5-625	APOGEE Advanced Operations	10/15/13	5-630	APOGEE PPCL Programming
03/12/13	5-615	APOGEE Field Panel and FLN Operations	11/12/13	5-620	APOGEE Workstation Operations
04/23/13	5-630	APOGEE PPCL Programming	12/03/13	5-625	APOGEE Advanced Operations
05/07/13	5-620	APOGEE Workstation Operations	HARRISBURG, PA		
06/11/13	5-635	APOGEE Programming for Efficient Building Operations	02/12/13	5-625	APOGEE Advanced Operations
DALLAS, TX			04/16/13	5-615	APOGEE Field Panel and FLN Operations
10/16/12	5-620	APOGEE Workstation Operations	06/11/13	5-630	APOGEE PPCL Programming
01/08/13	5-620	APOGEE Workstation Operations	08/06/13	5-710	APOGEE with BACnet for Experienced Insight Users
03/19/13	5-625	APOGEE Advanced Operations	09/10/13	5-620	APOGEE Workstation Operations
04/23/13	5-720	APOGEE with BACnet Workstation Operations	10/01/13	5-625	APOGEE Advanced Operations
05/14/13	5-615	APOGEE Field Panel and FLN Operations	11/05/13	5-635	APOGEE Programming for Efficient Building Operations
06/18/13	5-620	APOGEE Workstation Operations			

DATE	COURSE	TITLE	START DATE	COURSE	TITLE
HOUSTON, TX			MINNEAPOLIS, MN		
05/14/13	5-625	APOGEE Advanced Operations	03/12/13	5-620	APOGEE Workstation Operations
09/24/13	5-620	APOGEE Workstation Operations	04/16/13	5-615	APOGEE Field Panel and FLN Operations
LAS VEGAS, NV			09/17/13	5-620	APOGEE Workstation Operations
02/12/13	5-720	APOGEE with BACnet Workstation Operations	10/22/13	5-625	APOGEE Advanced Operations
04/16/13	5-620	APOGEE Workstation Operations	NEW ORLEANS, LA		
06/11/13	5-615	APOGEE Field Panel and FLN Operations	11/06/12	5-620	APOGEE Workstation Operations
09/24/13	5-725	APOGEE with BACnet Advanced Operations	03/26/13	5-625	APOGEE Advanced Operations
10/15/13	5-625	APOGEE Advanced Operations	06/18/13	5-615	APOGEE Field Panel and FLN Operations
LOS ANGELES, CA			09/10/13	5-630	APOGEE PPCL Programming
10/09/12	5-630	APOGEE PPCL Programming	11/05/13	5-620	APOGEE Workstation Operations
10/30/12	5-625	APOGEE Advanced Operations	OMAHA, NE		
12/11/12	5-620	APOGEE Workstation Operations	10/23/12	5-620	APOGEE Workstation Operations
01/15/13	5-615	APOGEE Field Panel and FLN Operations	04/16/13	5-620	APOGEE Workstation Operations
02/05/13	5-620	APOGEE Workstation Operations	ORLANDO, FL		
02/12/13	5-625	APOGEE Advanced Operations	10/16/12	5-620	APOGEE Workstation Operations
03/19/13	5-720	APOGEE with BACnet Workstation Operations	01/29/13	5-625	APOGEE Advanced Operations
04/09/13	5-630	APOGEE PPCL Programming	03/12/13	5-620	APOGEE Workstation Operations
06/04/13	5-635	APOGEE Programming for Efficient Building Operations	04/09/13	5-615	APOGEE Field Panel and FLN Operations
06/25/13	5-620	APOGEE Workstation Operations	05/14/13	5-630	APOGEE PPCL Programming
07/09/13	5-615	APOGEE Field Panel and FLN Operations	07/30/13	5-720	APOGEE with BACnet Workstation Operations
07/23/13	5-725	APOGEE with BACnet Advanced Operations	08/13/13	5-635	APOGEE Programming for Efficient Building Operations
08/06/13	5-625	APOGEE Advanced Operations	09/24/13	5-620	APOGEE Workstation Operations
09/24/13	5-620	APOGEE Workstation Operations	10/01/13	5-625	APOGEE Advanced Operations
10/01/13	5-630	APOGEE PPCL Programming	10/29/13	5-725	APOGEE with BACnet Advanced Operations
11/05/13	5-620	APOGEE Workstation Operations	PHILADELPHIA, PA		
12/03/13	5-720	APOGEE with BACnet Workstation Operations	10/02/12	5-635	APOGEE Programming for Efficient Building Operations
MIAMI, FL			10/30/12	5-690	Accelerated APOGEE Master Operator Program
11/13/12	5-620	APOGEE Workstation Operations	11/13/12	5-620	APOGEE Workstation Operations
01/15/13	5-725	APOGEE with BACnet Advanced Operations	12/04/12	5-625	APOGEE Advanced Operations
01/29/13	5-615	APOGEE Field Panel and FLN Operations	12/11/12	5-620	APOGEE Workstation Operations
02/19/13	5-720	APOGEE with BACnet Workstation Operations	01/08/13	5-620	APOGEE Workstation Operations
04/02/13	5-620	APOGEE Workstation Operations	02/05/13	5-620	APOGEE Workstation Operations
05/21/13	5-630	APOGEE PPCL Programming	03/05/13	5-615	APOGEE Field Panel and FLN Operations
06/18/13	5-625	APOGEE Advanced Operations	03/05/13	5-625	APOGEE Advanced Operations
07/09/13	5-725	APOGEE with BACnet Advanced Operations	03/19/13	5-630	APOGEE PPCL Programming
08/13/13	5-615	APOGEE Field Panel and FLN Operations	03/26/13	5-710	APOGEE with BACnet for Experienced Insight Users
09/10/13	5-720	APOGEE with BACnet Workstation Operations	04/09/13	5-635	APOGEE Programming for Efficient Building Operations
10/08/13	5-620	APOGEE Workstation Operations	04/23/13	5-620	APOGEE Workstation Operations
11/12/13	5-635	APOGEE Programming for Efficient Building Operations	05/07/13	5-725	APOGEE with BACnet Advanced Operations
			05/14/13	5-625	APOGEE Advanced Operations

DATE	COURSE	TITLE	START DATE	COURSE	TITLE
05/14/13	5-652	InfoCenter Suite	SAN ANTONIO, TX		
06/04/13	5-615	APOGEE Field Panel and FLN Operations	11/06/12	5-625	APOGEE Advanced Operations
06/04/13	5-620	APOGEE Workstation Operations	02/05/13	5-615	APOGEE Field Panel and FLN Operations
06/18/13	5-690	Accelerated APOGEE Master Operator Program	06/11/13	5-620	APOGEE Workstation Operations
07/16/13	5-620	APOGEE Workstation Operations	09/17/13	5-625	APOGEE Advanced Operations
08/13/13	5-625	APOGEE Advanced Operations	12/10/13	5-620	APOGEE Workstation Operations
08/20/13	5-630	APOGEE PPCL Programming	SAN DIEGO, CA		
09/10/13	5-615	APOGEE Field Panel and FLN Operations	10/16/12	5-625	APOGEE Advanced Operations
09/10/13	5-620	APOGEE Workstation Operations	11/06/12	5-615	APOGEE Field Panel and FLN Operations
09/17/13	5-690	Accelerated APOGEE Master Operator Program	12/04/12	5-620	APOGEE Workstation Operations
09/17/13	5-710	APOGEE with BACnet for Experienced Insight Users	01/08/13	5-620	APOGEE Workstation Operations
09/24/13	5-625	APOGEE Advanced Operations	02/05/13	5-630	APOGEE PPCL Programming
10/08/13	5-635	APOGEE Programming for Efficient Building Operations	03/12/13	5-625	APOGEE Advanced Operations
10/15/13	5-620	APOGEE Workstation Operations	04/16/13	5-620	APOGEE Workstation Operations
10/22/13	5-725	APOGEE with BACnet Advanced Operations	04/23/13	5-720	APOGEE with BACnet Workstation Operations
12/03/13	5-620	APOGEE Workstation Operations	05/21/13	5-615	APOGEE Field Panel and FLN Operations
12/10/13	5-625	APOGEE Advanced Operations	06/11/13	5-625	APOGEE Advanced Operations
PORTLAND, OR			07/16/13	5-620	APOGEE Workstation Operations
03/12/13	5-620	APOGEE Workstation Operations	07/23/13	5-630	APOGEE PPCL Programming
06/04/13	5-625	APOGEE Advanced Operations	07/30/13	5-725	APOGEE with BACnet Advanced Operations
09/10/13	5-615	APOGEE Field Panel and FLN Operations	08/06/13	5-635	APOGEE Programming for Efficient Building Operations
RALEIGH, NC			08/20/13	5-615	APOGEE Field Panel and FLN Operations
10/09/12	5-625	APOGEE Advanced Operations	10/22/13	5-620	APOGEE Workstation Operations
10/23/12	5-652	InfoCenter Suite	11/19/13	5-625	APOGEE Advanced Operations
11/06/12	5-615	APOGEE Field Panel and FLN Operations	SAN FRANCISCO, CA		
02/12/13	5-620	APOGEE Workstation Operations	10/02/12	5-620	APOGEE Workstation Operations
03/05/13	5-625	APOGEE Advanced Operations	12/11/12	5-720	APOGEE with BACnet Workstation Operations
06/18/13	5-615	APOGEE Field Panel and FLN Operations	01/29/13	5-620	APOGEE Workstation Operations
10/08/13	5-620	APOGEE Workstation Operations	02/19/13	5-615	APOGEE Field Panel and FLN Operations
11/12/13	5-625	APOGEE Advanced Operations	03/05/13	5-630	APOGEE PPCL Programming
ROCHESTER, NY			03/19/13	5-625	APOGEE Advanced Operations
11/06/12	5-625	APOGEE Advanced Operations	04/02/13	5-620	APOGEE Workstation Operations
02/12/13	5-630	APOGEE PPCL Programming	06/18/13	5-625	APOGEE Advanced Operations
05/07/13	5-620	APOGEE Workstation Operations	07/09/13	5-620	APOGEE Workstation Operations
09/17/13	5-625	APOGEE Advanced Operations	07/30/13	5-615	APOGEE Field Panel and FLN Operations
11/05/13	5-620	APOGEE Workstation Operations	08/06/13	5-725	APOGEE with BACnet Advanced Operations
SALT LAKE CITY, UT			09/17/13	5-625	APOGEE Advanced Operations
02/19/13	5-620	APOGEE Workstation Operations	10/15/13	5-635	APOGEE Programming for Efficient Building Operations
05/14/13	5-625	APOGEE Advanced Operations	11/12/13	5-620	APOGEE Workstation Operations
08/20/13	5-615	APOGEE Field Panel and FLN Operations	SEATTLE, WA		
11/05/13	5-620	APOGEE Workstation Operations	10/09/12	5-630	APOGEE PPCL Programming
			11/13/12	5-615	APOGEE Field Panel and FLN Operations
			12/04/12	5-635	APOGEE Programming for Efficient Building Operations

DATE	COURSE	TITLE
01/08/13	5-620	APOGEE Workstation Operations
02/26/13	5-625	APOGEE Advanced Operations
03/26/13	5-720	APOGEE with BACnet Workstation Operations
04/02/13	5-620	APOGEE Workstation Operations
05/07/13	5-620	APOGEE Workstation Operations
06/11/13	5-720	APOGEE with BACnet Workstation Operations
06/18/13	5-615	APOGEE Field Panel and FLN Operations
07/16/13	5-620	APOGEE Workstation Operations
08/20/13	5-625	APOGEE Advanced Operations
09/24/13	5-620	APOGEE Workstation Operations
10/15/13	5-630	APOGEE PPCL Programming
11/19/13	5-615	APOGEE Field Panel and FLN Operations
12/03/13	5-635	APOGEE Programming for Efficient Building Operations

SPOKANE, WA

09/17/13	5-620	APOGEE Workstation Operations
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ST. LOUIS, MO

11/13/12	5-630	APOGEE PPCL Programming
04/30/13	5-620	APOGEE Workstation Operations
08/13/13	5-630	APOGEE PPCL Programming
11/05/13	5-635	APOGEE Programming for Efficient Building Operations

TORONTO, ON

11/06/12	5-620	APOGEE Workstation Operations
04/30/13	5-620	APOGEE Workstation Operations
05/07/13	5-620	APOGEE Workstation Operations

VIRGINIA BEACH, VA

10/30/12	5-720	APOGEE with BACnet Workstation Operations
02/12/13	5-620	APOGEE Workstation Operations
05/21/13	5-720	APOGEE with BACnet Workstation Operations
08/20/13	5-725	APOGEE with BACnet Advanced Operations
09/10/13	5-625	APOGEE Advanced Operations
11/19/13	5-615	APOGEE Field Panel and FLN Operations

WASHINGTON, DC

10/09/12	5-620	APOGEE Workstation Operations
10/23/12	5-625	APOGEE Advanced Operations
11/06/12	5-620	APOGEE Workstation Operations
12/04/12	5-615	APOGEE Field Panel and FLN Operations
01/08/13	5-710	APOGEE with BACnet for Experienced Insight Users
01/15/13	5-620	APOGEE Workstation Operations
01/29/13	5-630	APOGEE PPCL Programming
02/05/13	5-615	APOGEE Field Panel and FLN Operations

START DATE	COURSE	TITLE
02/12/13	5-652	InfoCenter Suite
02/19/13	5-625	APOGEE Advanced Operations
02/26/13	5-720	APOGEE with BACnet Workstation Operations



03/05/13	5-620	APOGEE Workstation Operations
03/19/13	5-635	APOGEE Programming for Efficient Building Operations
04/09/13	5-620	APOGEE Workstation Operations
04/16/13	5-710	APOGEE with BACnet for Experienced Insight Users
04/23/13	5-615	APOGEE Field Panel and FLN Operations
05/07/13	5-620	APOGEE Workstation Operations
05/14/13	5-720	APOGEE with BACnet Workstation Operations
05/21/13	5-625	APOGEE Advanced Operations
06/04/13	5-620	APOGEE Workstation Operations
06/25/13	5-615	APOGEE Field Panel and FLN Operations
07/09/13	5-620	APOGEE Workstation Operations
07/16/13	5-710	APOGEE with BACnet for Experienced Insight Users
07/23/13	5-625	APOGEE Advanced Operations
08/13/13	5-620	APOGEE Workstation Operations
08/20/13	5-725	APOGEE with BACnet Advanced Operations
08/27/13	5-615	APOGEE Field Panel and FLN Operations
09/10/13	5-625	APOGEE Advanced Operations
09/17/13	5-620	APOGEE Workstation Operations
09/24/13	5-615	APOGEE Field Panel and FLN Operations
10/15/13	5-620	APOGEE Workstation Operations
10/22/13	5-710	APOGEE with BACnet for Experienced Insight Users
10/29/13	5-615	APOGEE Field Panel and FLN Operations
12/10/13	5-620	APOGEE Workstation Operations

WALT DISNEY WORLD, FL

03/12/13	5-900	Advanced APOGEE for Master Operators
10/08/13	5-900	Advanced APOGEE for Master Operators

OVERVIEW COURSES

Please Contact your local Siemens office for more information.



Insight 3.11 for New Users (4-6 hours)

159-180 (Student Guide); 159-179 (Instructor Guide)

Learn how to use Insight 3.11 to monitor and control a facility.

TOPIC:

YOU WILL LEARN TO:

Reports

- Identify the components of a Point Log.
- Run various Point Log reports.

Commander

- Command points and return them to system control.

Alarm Management

- Acknowledge and erase alarms.
- View messages for points in alarm.

Scheduler

- Define zones and events.
- Discuss scheduling events and overriding schedules.

Point Group Editor

- Organize points into groups.

Trending

- Determine when to trend a point by time and when to trend a point by Change-Of-Value (COV).

Graphics

- Display and navigate dynamic graphics.

PARTICIPANTS:

Building personnel who need operating skills with Insight systems.

PREREQUISITE:

None

As revisions to Insight software are released, training for new users and existing users will be offered.

New Features of Insight 3.11 for Existing 3.10 or 3.9.1 Users (4-6 hours)

159-178 (Student Guide); 159-177 (Instructor Guide)

Learn how to use Insight 3.11 to monitor and control a facility.

TOPIC:

YOU WILL LEARN TO:

Enhancements

- List the new features of Insight 3.11.

Scheduler

- Create a BACnet Schedule object, using the new BACnet Schedule Properties dialog box.
- Understand the Timeline view of the Scheduler application.

Graphics

- Use Transitional Colors with an associated point.
- Add Enhanced Graphics options to your graphics display.

System Profile

- Print the System Profile Tree.

Main Menu Icons

- Identify the new main menu icons.

PARTICIPANTS:

Building personnel who need operating skills with Insight systems.

PREREQUISITE:

None

Insight 3.10 for New Users (4-6 hours)

159-152 (Student Guide); 159-151 (Instructor Guide)

Learn how to use Insight 3.10 to monitor and control a facility.

PARTICIPANTS:

Building personnel who need operating skills with Insight systems.

PREREQUISITE:

None

TOPIC:

YOU WILL LEARN TO:

Reports

- Identify the components of a Point Log.
- Run various Point Log reports.

Commander

- Command points and return them to system control.

Alarm Management

- Acknowledge and erase alarms.
- View messages for points in alarm.

Scheduler

- Define zones and events.
- Discuss scheduling events and overriding schedules.

Point Group Editor

- Organize points into groups.

Trending

- Determine when to trend a point by time and when to trend a point by Change-Of-Value (COV).

Graphics

- Display and navigate dynamic graphics.



New Features of Insight 3.10 for Existing 3.9 or 3.9.1 Users (4-6 hours)

159-154 (Student Guide); 159-153 (Instructor Guide)

Learn about the new features and capabilities of Insight 3.10.

TOPIC:

YOU WILL LEARN TO:

Enhancements

- List the new features of Insight 3.9.1 And 3.10.

Main Menu Icons

- Identify the new Main Menu icons.

Hardware Support

- Use Insight to control the PXC36.
- Add a PXC compact on P1 to the FLN trunk.
- Configure an HOA on a PXC16 or 24.

Event Enrollment

- Configure and work with the BACnet Event Enrollment object.
- Build Event Enrollment objects.
- Receive Event Enrollment notifications.

SMTP Enhancements

- Provide additional information when configuring SMTP server settings for reports and RENO.

Graphics

- Display priority information for graphical elements.
- Configure and use enhanced graphics objects such as 3D charts and graphs.

User Accounts

- Apply default command priorities to user accounts.

PARTICIPANTS:

Existing Insight 3.9 or 3.9.1 users who are upgrading to Insight 3.10.

PREREQUISITE:

Information is presented in a manner that assumes students are familiar with the day-to-day operation of an Insight 3.9 or 3.9.1 system.

Field Panel GO (4-6 hours)

159-135 (Student Guide); 159-136 (Instructor Guide)

Learn about the new features and capabilities of Field Panel GO.

TOPIC:	YOU WILL LEARN TO:
Alarms	<ul style="list-style-type: none">• Acknowledge alarm status.
Graphics	<ul style="list-style-type: none">• Configure the default graphic.• View a list of available graphics.• Command analog points from a graphic.
Point Commander	<ul style="list-style-type: none">• Command point values and priorities.• Command a point to alarm.
Scheduler	<ul style="list-style-type: none">• View and modify properties of a mode schedule.• Override a mode schedule on a selected date.
Trend Data Report	<ul style="list-style-type: none">• Generate and print a Trend Data report.
Point Log Report	<ul style="list-style-type: none">• Generate and print a Point Log report.

PARTICIPANTS:

Building personnel who need operating skills with Field Panel GO systems.

PREREQUISITE:

None

Communicating with Your APOGEE Field Panel (4-6 hours)

159-074 (Student Guide); 159-075 (Instructor Guide)

Learn how to use an operator interface terminal to communicate with an APOGEE Field Panel.

TOPIC:	YOU WILL LEARN TO:
Operating	<ul style="list-style-type: none">• Log on and off a system.
Monitoring	<ul style="list-style-type: none">• Define the components of a point log.• Run a point log for one point or a group of points using wildcards.• Pause, resume and cancel the scrolling of reports.• Add points to Point Monitor and remove points from Point Monitor.• Run a Point Totalization Report.
Performing Diagnostics Troubleshooting	<ul style="list-style-type: none">• Determine when to trend a point by time and when to trend a point by Change-Of-Value (COV).• Add points to trend and remove points from trend.
Points	<ul style="list-style-type: none">• Command points.• Return commanded points to system control.

PARTICIPANTS:

Building personnel who need to communicate with an APOGEE Field Panel.

PREREQUISITE:

None



APOGEE Terminal Equipment Controllers (4-6 hours)

159-103 (Student Guide); 159-104 (Instructor Guide)

Learn how to use APOGEE Terminal Equipment Controllers (TECs) for effective building equipment management.

PARTICIPANTS:

Building personnel who need basic operating skills with APOGEE TECs.

PREREQUISITE:

None

TOPIC:

YOU WILL LEARN TO:

Identifying TECs

- Make a sketch of some or all of the Field Level Networks (FLNs) at your facility.

TECs on the FLN

- Explain the purpose of TECs.
- Describe how TECs control building equipment.

Controller Subpoints

- Explain the difference between logical points and subpoints.

Unbundling Subpoints

- Explain why TEC subpoints are unbundled in a network.

Communicating

- Communicate with a TEC from a room thermostat and through a field panel or Insight.

Introduction to Heating, Ventilation and Air Conditioning (HVAC) Basics (4-6 hours)

159-091 (Student Guide); 159-092 (Instructor Guide)

Learn basic HVAC concepts and how they apply to buildings.

PARTICIPANTS:

Building personnel who need a basic introduction to HVAC concepts as applied to their building.

PREREQUISITE:

None

TOPIC:

YOU WILL LEARN TO:

Thermodynamic Calculations

- Calculate basic CFM/BTU requirements.

Heating and Cooling Systems

- Identify and describe major systems at your site for heating and cooling.

Warm and Cold Air Production and Distribution

- Trace the path of warm and cold air from its source to its final distribution into rooms and other spaces.
- Describe the specific equipment at your site for heating and cooling.
- Describe the type of terminal equipment at your site, if any, for the distribution of warm and cold air.

Room and Building Pressurization

- Discuss why pressurization in an entire building and in specific spaces is important.
- Identify any special-needs areas you have, such as: labs, computer rooms, process areas, etc.

Filtration

- Explain how air is filtered at your facility.

Mechanical Equipment Terminal Equipment

- Identify mechanical and terminal equipment at your facility.

SELF-STUDY MATERIALS

Web-Based and CD Training Requirements

For more information or to take a web-based course, visit www.siemens.com/esonline. To purchase the training CDs, fax your order to (847) 215-4792 or email teresa.grace-regan@siemens.com. The order form is on page 76.

To benefit fully from the web and CD training, students should have basic computer skills before beginning the training.

SYSTEM REQUIREMENTS FOR CD TRAINING:

Minimum

Windows 98/NT/XP or 2000, Pentium III or higher, 400 MHz clock speed with 256 MB RAM, 8x CD-ROM, color monitor that is capable of displaying thousands of colors at 800 x 600 pixels, 16-bit sound card, Windows Media Player, Adobe Flash Player 10 or higher.

Recommended

Windows 7/98/NT/XP or 2000, Pentium IV or higher, 1 GHz clock speed with 512 MB RAM, 16x CD-ROM, color monitor that is capable of displaying thousands of colors at 1,024 x 768 pixels, 16-bit sound card, Windows Media Player, Adobe Flash Player 10 or higher.

INTERNET BROWSER REQUIREMENTS:

Windows:

Internet Explorer version 6 or later, Firefox 1.0 or later, Safari 3 or later, Google Chrome 14 or later, Opera 9.5 or later

Mac:

Safari 3 or later, Firefox 1.0 or later, Google Chrome 14 or later

Linux:

Firefox 1.0 or later

Apple iOS:

Training courses created with Articulate Storyline software can be viewed with the Articulate Mobile Player App (available on iTunes) for iPad. Apple iOS 5.0 or higher.

SYSTEM REQUIREMENTS FOR WEB-BASED TRAINING:

Internet Explorer 7 or higher, Firefox version 3.6 or 8.0 or Google Chrome 16.



CD



WEB



WORKBOOK





Interactive CD Training

Learn how to use APOGEE Insight applications and hardware components at your own pace through these convenient interactive CD self-study training modules. Detailed descriptions of each of the self-study modules are available on the next several pages.

MODULE LENGTH:

The training modules can be either one or two CDs depending upon the amount of material covered for that topic.

PARTICIPANTS:

Each training module description has listed the recommended participants it was designed for to enhance the effectiveness of the training for those individuals.

Save 25% on two or more CDs training modules when purchased at the same time.

TOPIC:

AVAILABLE CD MODULES FOR \$299 EACH:

Insight Applications

- APOGEE Insight Basics
- APOGEE Reports
- APOGEE Scheduler
- APOGEE Trending

Hardware Devices

- Introduction to Terminal Box Terminal Equipment Controllers (TECs)
- Introduction to the PXC-Modular Field Panel and TX-I/O

APOGEE Programming

- Introduction to PPCL programming

Desigo CC

- DCC 100 Introduction to Desigo CC

Lab Room Controls

- Introduction to the Fume Hood and Laboratory Room Controllers

Interactive CD Training Packages

PACKAGES:

MODULE COMBINATIONS:

Double:

Pick two of the above CDs

\$445

Triple:

Pick three of the above CDs

\$670

Introduction to PPCL Programming

This module teaches the basic flow and functionality of the Powers Process Control Language (PPCL) and it enhances troubleshooting abilities.

TOPIC:

YOU WILL LEARN TO:

Programming Concepts

- Describe how PPCL is used.
- Understand the relationship between a PPCL program and Insight.
- Describe how a PPCL program controls your building.

Basic PPCL Structure

- List the benefits of Mode Programming.
- Identify common PPCL statements and their syntax.
- Identify Local Variables and Resident Points.

Navigating Program Editor

- Use key editing tools.
- Compile and save programs.
- Download programs to APOGEE Field Panels.

Panel PPCL Reports

- Create a Panel PPCL Report Definition.
- Generate a Panel PPCL Report.
- Interpret common report flags to identify program execution.



PARTICIPANTS:

Building personnel who need a better understanding of PPCL programming to troubleshoot their system.

PRICE:

CD version \$299 (U.S.)

APOGEE Insight Basics

This module includes an introduction to the five most commonly-used APOGEE Insight applications.

TOPIC:	YOU WILL LEARN TO:
Graphics	<ul style="list-style-type: none">• Navigate through graphic links.• Display informational text and alarm messages from a graphic.• Command points from a graphic.• Identify types of dynamic information that are displayed on graphic screens.
Alarm Status	<ul style="list-style-type: none">• Acknowledge point alarms.• Add a point memo.• View the alarm history of a point.
Main Menu	<ul style="list-style-type: none">• Start Insight from Windows.• Find online documentation and help.• Customize the Insight main menu.
Report Viewer	<ul style="list-style-type: none">• Start the Report Viewer application.• Run a report from Insight.• Command a point from the Report Viewer.
Panel Point Log Screen	<ul style="list-style-type: none">• Run a Panel Point Log Report from the Insight main menu.• Use a Panel Point Log Report to view point details and status.

NEW DCC 100 Introduction to Desigo CC

This module provides an introduction to the Desigo CC Management Station. Students will learn how the new management station is built on existing Siemens technology to make an easy to use system that is smart, adaptable, open and robust. Students will observe the Desigo CC workflow through a series of video demonstrations showcasing some of the basic applications of Desigo CC.

TOPIC:	YOU WILL LEARN TO:
Platform Design	<ul style="list-style-type: none">• Understand how Desigo CC pulls together multiple disciplines in a full-featured control station.• Understand how Desigo CC is easy to use, anticipates the user's needs, is adaptable, open to integration and built on Siemens SCADA platform.
Workflow	<ul style="list-style-type: none">• Understand the workflow of Desigo CC.
Applications	<ul style="list-style-type: none">• Use basic applications, including:<ul style="list-style-type: none">- Graphics- Trending- Reporting- Video- Scheduling- Event Treatment



PARTICIPANTS:

This interactive training module is recommended for building operators who: (1) are new users of Insight and need basic operator skills to control buildings, (2) are upgrading their version of Insight software, (3) need to refresh basic operator skills on Insight or (4) need to perform operations in a simulated environment. This module is excellent for personnel who are scheduled for an APOGEE Workstation Operations (5-620) class, but want to begin training as soon as possible.

PRICE:

See website for cost of web-based training.
Insight version 3.10
CD version \$299 (U.S.)



PARTICIPANTS:

Building personnel who need an overview of the Desigo CC Management Station.

PRICE:

CD version \$299 (U.S.)



APOGEE Scheduler

Module one teaches the terms and concepts of the scheduler application, how to navigate through the application and how to schedule an event. Module two explains how to schedule a zone, populate and schedule a replacement day, perform a day shift, override an event schedule and schedule trend collections and reports.

Module One

PARTICIPANTS:

Module One is for APOGEE operators who need to control buildings using the APOGEE scheduler application. Module Two is for APOGEE operators and administrators who need to control buildings using advanced features of the APOGEE scheduler application. This module is helpful to building operators who want to refresh their skills with the event builder or scheduler applications.

PRICE:

See website for cost of web-based training. CD version (includes modules 1 and 2) \$299 (U.S.)

TOPIC:

YOU WILL LEARN TO:

Applications

- Define terms associated with the Scheduler application.

Concepts

- Setup Zone and Event definitions and replacement days.

Navigation

- Navigate through the application.
- View daily and weekly schedules.
- View replacement days.

Events

- Set the duration and repetition of Events.
- Use a day span.
- Select the scheduled date.

Module Two

TOPIC:

YOU WILL LEARN TO:

Trend Collections and Reports

- Schedule trend collections and reports.

Scheduled

- Populate and use replacement days.

Operations

- Use day shifts.
- Override scheduled operations.

Events and Zones

- Schedule events and zones.
- Repeat event and zone schedules.
- Use the day span and scheduled date features.

BONUS PRACTICE AND ASSESSMENT MODULES:

This CD includes 2 sections designed to simulate the APOGEE Insight software. The Practice section provides hands-on interaction for the user to click through the previously demonstrated steps with guided assistance. The Assessment section provides hands-on interaction without guided assistance.

NOTE: These modules are linear-based software simulators and only provide the ability to complete specific steps performed in the demonstration.



APOGEE Trending

Module one teaches the terms and concepts of the scheduler application, how to navigate through the application and how to schedule an event. Module two explains how to schedule a zone, populate and schedule a replacement day, perform a day shift, override an event schedule and schedule trend collections and reports.

Module One

TOPIC:	YOU WILL LEARN TO:
Definitions	<ul style="list-style-type: none">• Define Interval and Change-Of-Value (COV) Trending.
Concepts	<ul style="list-style-type: none">• State the purposes of trending.• Explain how field panel memory is affected by trending operations.• Decide which method of trending should be used based on your objectives.
Trending	<ul style="list-style-type: none">• Add, delete and modify Point Trend Definitions.

Module Two

TOPIC:	YOU WILL LEARN TO:
Collecting Data	<ul style="list-style-type: none">• Setup a Trend Collection Report to retrieve data from the Field Panel.• Perform Trend Collections.
Viewing Data	<ul style="list-style-type: none">• Build and save a Trend Data Detail Report definition.• Save the data from a Trend Data Detail Report to a file.• View data from Trend Interval Reports, Trend Sample Reports and Trend Summary Reports.
Interpreting and Analyzing Data	<ul style="list-style-type: none">• Verify proper system operation.

BONUS PRACTICE AND ASSESSMENT MODULES:

This CD includes 2 sections designed to simulate the APOGEE Insight software. The Practice section provides hands-on interaction for the user to click through the previously demonstrated steps with guided assistance. The Assessment section provides hands-on interaction without guided assistance.

NOTE: These modules are linear-based software simulators and only provide the ability to complete specific steps performed in the demonstration.



Module One is for operators who need to use the APOGEE system to place points into trend. Module Two is for operators who need to use the APOGEE system to view and interpret trend information. These modules are helpful for building operators who want to refresh their skills with the trend application.

PRICE:

See website for cost of web-based training. CD version (includes modules 1 and 2) \$299 (U.S.)



UPDATED APOGEE Reports 2.0

This module explains how to use the Report Builder and Report Viewer applications with the Insight software.

PARTICIPANTS:

APOGEE operators who need to build and view reports that display system information. This module is helpful for building operators who need to refresh their skills with the Report Builder and Report Viewer applications.

PRICE:

CD version \$299 (U.S.)

TOPIC:

YOU WILL LEARN TO:

Report Builder

- Navigate through the Report Builder application.
- Setup a Report Definition to create a file.
- Configure report header information.
- Configure a Panel Point Log report for points in operator priority.

Report Viewer

- Use the object selector to choose a report to view.
- Run reports.
- Refresh report data.

BONUS PRACTICE AND ASSESSMENT MODULES:

This CD includes 2 sections designed to simulate the APOGEE Insight software. The Practice section provides hands-on interaction for the user to click through the previously demonstrated steps with guided assistance. The Assessment section provides hands-on interaction without guided assistance.

NOTE: These modules are linear-based software simulators and only provide the ability to complete specific steps performed in the demonstration.



UPDATED Introduction to Terminal Box TECs 2.0

This module explains the basic operation and function of a Terminal Box Terminal Equipment Controller (TEC).

Participants:

Building personnel who communicate directly with TECs using Datamate Base.

Price:

CD version \$299 (U.S.)

TOPIC:

YOU WILL LEARN TO:

General

- State the purpose of TECs.
- Describe physical components of TECs.

Interfacing

- Describe how to communicate with a TEC locally using Datamate Base.

Points

- Describe the different types of subpoints.
- List the function of selected subpoints.

Operation

- Do basic operations.
- Set a minimum and maximum room temperature setpoint.
- Trace the generation of the temperature control setpoint.
- List the requirements for a TEC to switch between heating and cooling modes.

Introduction to the PXC-Modular Field Panel and TX-I/O

This module explains the operation and features of the PXC-Modular Field Panel.

TOPIC:	YOU WILL LEARN TO:
Physical Layout	<ul style="list-style-type: none"> Identify hardware components.
Point Number Ranges	<ul style="list-style-type: none"> Describe how to expand the point count of the PXC-Modular field panel.
Power Requirements	<ul style="list-style-type: none"> Describe the power requirements of the PXC-Modular field panel.
Series Operations	<ul style="list-style-type: none"> Identify the available options.
Network Architecture	<ul style="list-style-type: none"> Identify the features that the PXC-Modular field panel supports on the system architecture.
TX-I/O	<ul style="list-style-type: none"> Describe the TX-I/O point modules and their use.

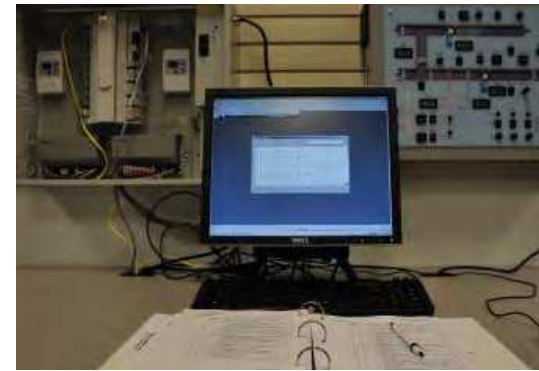


PARTICIPANTS:

Building personnel who work with the PXC-Modular Field Panel.

PRICE:

See website for cost of web-based training.
CD version \$299 (U.S.)



Introduction to Fume Hood and Laboratory Room Controls

This module explains the basic components of a fume hood and the operations of the controllers. After you complete this training, you should understand the different readings on the Operator Display Panel and values on different reports.

TOPIC:	YOU WILL LEARN TO:
Fume Hood Components	<ul style="list-style-type: none"> Identify the hardware components of a Fume Hood.
Operator Display Panel (ODP)	<ul style="list-style-type: none"> Interpret the information displayed on the ODP.
Fume Hood Controller	<ul style="list-style-type: none"> Describe VAV Fume Hood Controller operations. Define face velocity.
Room Control	<ul style="list-style-type: none"> Describe volumetric flow tracking of a laboratory room. Describe the TX-I/O point modules and their use.



PARTICIPANTS:

Personnel who work or control fume hoods in a laboratory using APOGEE Automation System controls.

PRICE:

See website for cost of web-based training.
CD version \$299 (U.S.)





FIRE SAFETY:
CLASSROOM TRAINING
SELF-STUDY MATERIALS



Training Options

We offer training classes at locations throughout the U.S. and Canada. We provide fire safety equipment for each student to practice with during the classes. If you have several students to train, you may want to schedule a class at your facility to save on student travel expenses.

DATES, LOCATIONS AND FEES

Call 1-800-487-7771 for the dates, locations and cost of training classes.

How to Enroll

Call **1-800-487-7771**.

Lodging and Transportation

Students are responsible for their lodging and transportation when attending training at any location. Hotel and travel recommendations are included in the confirmation letters sent to students after enrolling.

Confirmation

If a confirmation letter is not received three weeks before the class begins, call **1-800-487-7771**.

Cancellation Policy

Students who cancel within 21 calendar days of the class start date will be charged 50% of the tuition. Students will be charged 100% of the tuition if they cancel the day of the class or do not attend. The cancellation fee may be waived if your organization sends a qualified student as a substitute.

NOTE: Siemens reserves the right to cancel classes and assumes no liability for expenses incurred by students due to class cancellation. All students will be notified of class cancellations.

Training Software

Programming software is provided for use during classes. The software is for training use only and will not operate in customer installations. Contact your Siemens Industry representative to purchase a software license and software.

NOTE: No audio/visual recording equipment is allowed in the classes.



Equipment Requirements

Siemens Industry provides fire safety equipment and simulators for training classes. **Each student must bring a laptop computer to training that meets the following minimum hardware and software requirements:**

For MXL Classes:

Microsoft Windows version 2000 (with Service Pack 1 or greater), Windows XP; Pentium-class CPU with 200 MHz minimum speed; 64 MB RAM minimum (128 MB or more recommended); CD-ROM drive or USB memory card; 800 x 600 screen resolution; 250 MB available hard disk space; 2-button mouse; Microsoft Internet Explorer version 4 or later; a serial port (USB to serial port adapter operating at COM1 or COM2 may also be used as long as the software driver is installed).

NOTE: A laptop running either Windows Vista or Windows 7 CANNOT be used in this class. The student must have Administrator access to the laptop computer.

For all other FIS classes:

Microsoft Windows version 2000, Windows XP, or Windows 7; Pentium-class CPU with 1.6 GHz minimum speed; 512 RAM minimum; CD-ROM drive; USB drive; Ethernet Port; 1024x768 minimum screen resolution; 1GB available hard disk space; Microsoft Internet Explorer or similar browser; Acrobat Reader Version 6 or higher; 2-button mouse; serial port (USB to serial port adapter operating at COM1 or COM2 may also be used as long as the software driver is installed).

NOTE: A laptop running Windows Vista operating system CANNOT be used in this class. The student must have Administrator access to the laptop computer.



TRAINING
COORDINATOR

Fire Systems Training Team



MIKE BINKOWSKI
Certified Instructor



RIC GREENHOE
Certified Instructor



CHARLES HAMBY
Certified Instructor



DEVEN JACKSON
Certified Instructor



STEVE KUEHN
Certified Instructor



EWA KLIMEK
Training Coordinator



JEAN ORPHEE
Certified Instructor



JOHN TRABER
Certified Instructor



DAN ZEDAN
Certified Instructor

CLASSROOM TRAINING COURSES

FIS 1114 MXL Installation, Operation and Maintenance (4 days)

Learn to install, operate, maintain, test, troubleshoot and wire an MXL advanced microprocessor-based fire alarm system. The custom software, Acculink (CSG-M), will be used to transfer customer programs to the MXL Fire Alarm System. Simple changes will be made to installed software.

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining an MXL system.

PREREQUISITE:

Working knowledge of addressable fire alarm systems and IBM computers is assumed. Students must complete web-based training before attending this class: FIS 100 (Fire Detection and Alarm System Basics) and FIS 150 (MXL/MXLV Fire Panels and Components).

TOPIC:

Basic Control Unit

YOU WILL LEARN TO:

- Acknowledge Alarms, Supervisories, Troubles and Securities at the panel.
- Silence the panel.
- Reset the panel.

Devices

- Install field devices.
- Use the Device Programming Unit (DPU).
- Add devices to the database using Acculink (CSG-M) software.
- Perform electrical installation and checkout.

Menu Functions

- Use panel menu functions.
- Configure and print reports.
- View and change detector sensitivities.
- Enable and disable points.

MXL Programming Tool (Acculink)

- Create an MXL configuration.
- Transfer configurations to MXL Systems.

Workshop Exercises

- Construct an MXL-IQ system from discrete components.
- Operate and test the MXL System.
- Test and inspect an MXL System per NFPA 72 standards.
- Troubleshoot an MXL System.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for more information.

CEUs:

2.7 CEUs

“We do not have to repair the system a lot but when we do, we will have the tools to do it.”

John Lunke

Department of Corrections



FIS 1124 MXL Voice Installation, Operation and Maintenance (4 days)

Learn to install, operate and maintain an MXLV integrated voice evacuation system. A functional description of the system and modules, including single and multiple channel configurations and the various system architectures, will be taught. Hands-on labs allow students to work with the hardware as well as the Acculink software (CSG-M) of the MXLV system.

TOPIC:	YOU WILL LEARN TO:
Voice System Basics	<ul style="list-style-type: none">• Understand the basic principles of an analog voice system.• Identify voice hardware.• Understand the difference between Distributed and Bulk Amplification.• Install proper shielding.
3-Channel Voice	<ul style="list-style-type: none">• Understand the concept of a 1-, 2- and 3-channel voice system.• Explain the concepts of various Zone cards used for audio distribution.• Understand Bulk Amplifiers and Supervision.
Transponders	<ul style="list-style-type: none">• Install networks for voice systems including master/remote and peer-to-peer networks.
Shielding	<ul style="list-style-type: none">• Install proper shielding for low-level and high-level audio.
Workshop Exercises	<ul style="list-style-type: none">• Operate an MXL Voice panel in emergency and maintenance situations.

COURSE LENGTH:
Four days ending by noon on the last day.

PARTICIPANTS:
Persons responsible for engineering, installing, maintaining or operating an MXL Voice System.

PREREQUISITE:
Successful completion of FIS 1114. Knowledge of Acculink software is helpful.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for more information.

CEUs:

2.7 CEUs



FIS 1134 MXL Advanced and Networking (4 days)

Learn to setup, modify, test, troubleshoot and control an M-NET and X-NET System as well as use the Global MKB monitor.

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining an MXL networked system.

PREREQUISITE:

Successful completion of FIS 1114. Knowledge of the Acculink software is strongly recommended.

TOPIC:

YOU WILL LEARN TO:

Basic System Operation

- Operate the MXL, MXL-IQ and X-NET Systems.
- Use the test and maintenance menu.
- Use the operational features of the MXL System.
- Configure the M-NET.

Basic Option Modules

- Install basic option modules.
- Use the Acculink program.

Special Option Modules

- Install special option modules.
- Setup repeaters and Fiber Optic Module (daisy chain or star configuration).

MXL-IQ

- Operate the MXL-IQ System.
- Use the operational features of the MXL-IQ.
- Install basic modules and understand their application.

X-NET

- Setup and operate an X-NET system.
- Recognize the difference between X-NET and M-NET.
- Install new modules and understand their application.

Logic Functions

- Setup inter-panel logics.

Global MKB Monitors

- Install and operate Global MKB monitors.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for more information.

CEUs:

2.7 CEUs



FIS 1144 Acculink MXL Programming Tool (4 days)

Learn to design, modify, test and use the MXL Fire System Software, Acculink (CSG-M), and how to use the software logic to design an MXL fire system. Every CSG-M function used for fire systems will be discussed as well as each different type of input and output.

TOPIC:	YOU WILL LEARN TO:
Basic System Operation	<ul style="list-style-type: none">• Install and navigate through the Acculink (CSG-M) software.• Apply CSG-M and MXL security.
Ten Steps to Programming	<ul style="list-style-type: none">• Follow the steps from project specifications to compiling your configuration.
Logic Functions	<ul style="list-style-type: none">• Use basic and complex logic including inputs and outputs.• Understand logic and timer functions.
Functional Block	<ul style="list-style-type: none">• Create functional block diagrams.
Diagrams	<ul style="list-style-type: none">• Use functional diagrams to de-bug your program.
Workshop Exercises	<ul style="list-style-type: none">• Apply the ten steps to programming.• Design MXL Fire Alarm System configurations.

NOTE: This class does not teach voice programming functions. These are taught in the MXL Voice IOM (FIS 1124) class.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please note that the laptop should not have the programming software installed. Please refer to page 51 for more information.

CEUs:

2.7 CEUs

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for programming an MXL System.

PREREQUISITE:

Successful completion of FIS 1114.

“The instructor was very, very knowledgeable.”

Kyle Scott
Metropolitan Washington
Airport Authority



FIS 2114 XLS Installation, Operation and Maintenance (4 days)

Learn to install, operate, maintain, test, troubleshoot and wire an XLS firefinder system. The custom software, ZEUS configuration tool, will be used to transfer customer programs to the XLS system. Changes will be made to installed software during the course.

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining an XLS System.

PREREQUISITE:

Working knowledge of addressable fire alarm systems and IBM computers is assumed. Students must complete web-based training before attending this class: FIS 100 (Fire Detection and Alarm System Basics) and FIS 250 (XLS/XLSV Fire Panels and Components).

TOPIC:

YOU WILL LEARN TO:

Basic Control Unit

- Acknowledge Alarms, Supervisories, Troubles and Securities at the panel.
- Silence the panel.
- Reset the panel.

Devices

- Install field devices.
- Use the Device Programming Unit (DPU).
- Add devices to the database using ZEUS programming tool.
- Perform electrical installation and checkout.

Menu Functions

- Use panel menu functions.
- Configure and print reports.
- View and change detector sensitivities.
- Enable and disable points.

XLS Programming Tool (ZEUS)

- Create an XLS configuration.
- Transfer configurations to XLS System.
- Update panel and module firmware.

Workshop Exercises

- Construct an XLS System from discrete components.
- Operate and test the XLS System.
- Test and inspect an XLS System per NFPA 72 standards.
- Troubleshoot an XLS System.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please note that a laptop should not have the programming software installed. Please refer to page 51 for more information.

CEUs:

2.7 CEUs



“The instructor made every effort to ensure each student was on track in the classroom.”

Janice Reid
Lawrence Liver
National Laboratories

FIS 2124 XLS Voice Installation, Operation and Maintenance (4 days)

Learn to install, operate, maintain and program the XLSV integrated voice-evacuation system. A functional description of the system and modules, including single and multiple channel configurations and the various system architectures, will be discussed. A hands-on lab will allow students to work with the hardware as well as the ZEUS configuration tool of the XLSV system.

TOPIC:

YOU WILL LEARN TO:

Voice System Basics

- Understand the basic principles of a digital voice system.
- Identify voice hardware.
- Understand the difference between Distributed and Bulk Amplification.

8-Channel Voice Operation

- Understand the concept of 8-channel operation.

Transponders

- Design a voice system with remote enclosures (transponders).

Software Design

- Navigate through the ZEUS programming tool.
- Apply the various configurations of the voice system.

Workshop Exercises

- Operate an XLS voice panel in emergency and maintenance situations.

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining an XLS System.

PREREQUISITE:

Successful completion of FIS 2114 is required. Knowledge of the ZEUS programming tool is helpful.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for more information.

CEUs:

2.7 CEUs



FIS 2134 XLS Advanced and Networking (4 days)

Learn to setup, modify, test, troubleshoot and control H-NET and X-NET Systems as well as use the Global PMI monitor.

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining an XLS networked system.

PREREQUISITE:

Successful completion of FIS 2114. Knowledge of the ZEUS programming tool is strongly recommended.

TOPIC:

Basic System Operation

YOU WILL LEARN TO:

- Operate the XLS and X-NET systems.
- Use the test and maintenance menu.
- Use the operational features of the XLS.
- Configure the H-NET.

Basic Options Module

- Install basic option modules.
- Use the ZEUS programming tool.

Special Options Modules

- Install special option modules.
- Describe fiber optic module for X-NET and H-NET.

X-NET

- Setup and operate an X-NET System.
- Recognize the difference between X-NET and H-NET.
- Install new modules and understand their application.

Global PMIs

- Install and operate Global PMI monitors.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for more information.

CEUs:

2.7 CEUs



“The presentation from Siemens; good hands-on and good data sheets with a logical sequence of materials.”

Frank Coffman
University of Virginia

FIS 2144 ZEUS XLS Programming Tool (4 days)

Learn how to design, modify, test or otherwise use the XLS custom system software logic configuration tool (ZEUS) and how to use the software logic to design an XLS Fire Alarm System. Every ZEUS function used for fire systems will be discussed as well as each different type of input and output.

TOPIC:	YOU WILL LEARN TO:
Basic System Operation	<ul style="list-style-type: none">• Install and navigate through the ZEUS software.• Apply ZEUS and XLS security.
Ten Steps To Programming	<ul style="list-style-type: none">• Use the steps from project specifications to compiling your configuration.
Logic Functions	<ul style="list-style-type: none">• Understand basic and complex logic including inputs and outputs.• Understand logic and timer functions.
Functional Block	<ul style="list-style-type: none">• Create functional block diagrams.
Diagrams	<ul style="list-style-type: none">• Use functional diagrams to de-bug your program.
Workshop Exercises	<ul style="list-style-type: none">• Apply the ten steps to programming.• Design XLS Fire System configurations.

NOTE: This class does not teach voice programming functions.

PREREQUISITE:

Successful completion of FIS 2114.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please note that a laptop should not have the programming software installed. Please refer to page 51 for more information.

CEUs:

2.7 CEUs

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for programming a FireFinder XLS system or for administering the ZEUS programming tool.

“The amount of hands-on time was excellent.”

Dave Wright

Koorsen Fire & Security



FIS 3113 System 3 Installation, Operation and Maintenance (3 days)

Learn to install, operate, maintain, test, troubleshoot and wire a System 3 conventional fire detection system. Each system module/device will be discussed and its operation analyzed.

COURSE LENGTH:

Three days ending by 4:30 p.m. on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing, maintaining or operating a System 3 Fire Detection System.

PREREQUISITE:

A working knowledge of fire alarm systems is assumed.

TOPIC:

YOU WILL LEARN TO:

Basic Control Unit

- Operate the system.
- Use the test and maintenance menu.

Basic Option Modules

- Install basic option modules.
- Install field devices.

Special Option Modules

- Install special option modules.

PAD 3

- Install the PAD 3.

Workshop Exercises

- Operate, test and troubleshoot the System 3 panel.

CEUs:

2.3 CEUs

FIS 4134 NCC–Network Command Center (4 days)

Learn to monitor and control an MXL, XL-3 or XLS System using the Network Command Center (NCC).

TOPIC:

YOU WILL LEARN TO:

NCC

- Define the NCC and explain how it monitors and controls MXL, XL-3 and XLS systems.

Hardware

- Describe hardware interfaces with MXL, XL-3 and XLS systems.
- Describe the hardware required to operate the NCC.

Software

- Explain the NCCNT-G/GI and NCCNT WAN and how they are used.
- Describe the NCCNT-G family of products.
- Understand licensing requirements.

Workshop Exercises

- Install the NCC.
- Configure an NCC system.
- Import and modify graphics.
- Operate a network system using the NCC.
- Configure macros and time events.

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining an NCC system.

PREREQUISITE:

Successful completion of FIS 1114 or FIS 2114.

CEUs:

2.7 CEUs

FIS 5512 FS-250 Installation, Operation and Maintenance (2 days)

Learn to install, operate, maintain, test, troubleshoot and wire an FS-250 addressable fire alarm control panel. Each system module/device will be discussed and its operation analyzed. How to use FS-CT custom software to transfer customer programs to the FS-250 and make simple changes to installed software will also be discussed.

TOPIC:

YOU WILL LEARN TO:

Basic Control Unit

- Operate the FS-250 panel.
- Use the test and maintenance menu.

Basic Option Modules

- Describe basic option modules.
- Use the FS-CT program.

Special Option Modules

- Describe special option modules.

Workshop Exercises

- Operate, test and troubleshoot the FS-250 panel.

COURSE LENGTH:

Two days ending by 4:30 p.m. on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing, maintaining or operating FS-250 panels.

PREREQUISITE:

Working knowledge of addressable fire alarm systems, IBM computers and DOS is assumed.

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for computer hardware and software requirements.

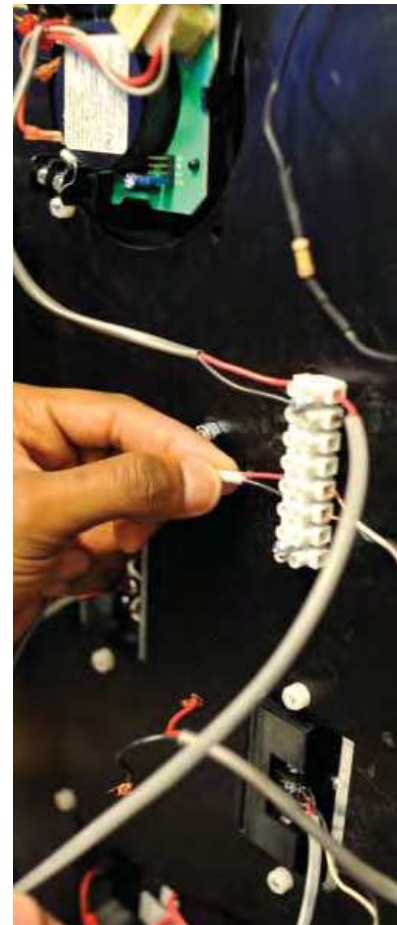
CEUs:

1.5 CEUs

“The instructor did a great job explaining everything.”

John Wilson

Koorsen Fire & Security



FIS 6213 Sinorix Engineering and Design (3 days)

Learn to design a Sinorix 227 system using Siemens Sinorix 227 FlowCalc software.

COURSE LENGTH:

Three days ending by 4:30 p.m. on the last day.

PARTICIPANTS:

Persons responsible for designing or managing a Sinorix 227 system installation. If you have already attended the FIS 6113 or FIS 6214, you do not need to take this course. The FIS 6213 is very similar to the FIS 6113 and the FIS 6214.

TOPIC:

Sinorix

YOU WILL LEARN TO:

- Understand flooding agents and how to protect a hazard.
- Discuss safety procedures.
- Discuss MXL, XLS and Desigo or Cerberus PRO releasing options.

Hardware

- Describe hardware components including cylinders, valves and nozzles.
- Discuss hardware maintenance procedures.

Software

- Use Sinorix 227 FlowCalc software to predict flow.
- Design and build an isometric pipe network.

Project Management

- Overview of enclosure integrity testing.

PREREQUISITE:

None

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for computer hardware and software requirements.

CEUs:

2.3 CEUs



“I especially liked that the class was short but informative which allows me to return to work quickly.”

Branden Barrett
Continental Integrated
Technologies

FIS 7114 VESDA System Design and Maintenance (4 days)

Learn to engineer, design, install, maintain and troubleshoot the VESDA Air Sampling Smoke Detection (ASSD) system.

TOPIC:	YOU WILL LEARN TO:
Applications	<ul style="list-style-type: none">• Understand various common applications for ASSD systems.
Codes and Standards	<ul style="list-style-type: none">• Identify the NFPA codes and standards for ASSD systems.
Operations	<ul style="list-style-type: none">• Design, install and commission VESDA systems.• Recognize good and bad system designs.• Understand how to apply ASSD equipment to the risk area.• Test and maintain the systems.• Operate the VESDA unit.
Hardware	<ul style="list-style-type: none">• Install VESDA hardware components.• Understand how components work, including the “pipe” network.
Detectors	<ul style="list-style-type: none">• Install, maintain and operate the various detection models and units.
Programming	<ul style="list-style-type: none">• Program, test and troubleshoot the units.• Install remote units.
Display	<ul style="list-style-type: none">• Use the operating display to control the air sampling unit.
Network	<ul style="list-style-type: none">• Set-up a VESDA-NET.
Pipe Design Programs	<ul style="list-style-type: none">• Use the pipe design program (Aspire) to validate the air sampling designs.

PREREQUISITE:

None

REQUIRED EQUIPMENT:

Students must bring a laptop computer to training. Please refer to page 51 for computer hardware and software requirements.

CEUs:

2.7 CEUs

COURSE LENGTH:

Four days ending by noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining VESDA air sampling systems.



FIS 9102 Desigo Fire Safety UL 50-Point Panel

(1.5 days)

Learn to install, operate, maintain, test, troubleshoot and program the Desigo Fire Safety 50-point panel system (FC2005). The custom software, FXS901-U2 configuration tool, will be used to transfer customer programs to the Desigo Fire Safety system. Changes will be made to installed software during the course.

COURSE LENGTH:

Two days ending at noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining a Desigo Fire Safety system.

PREREQUISITE:

Working knowledge of addressable fire alarm systems and IBM computers is assumed. Students must complete web-based training before attending this class – FIS 900 Desigo Fire Safety System Overview.

CEUs:

1.10 CEUs

TOPIC:

YOU WILL LEARN TO:

Basic Control Unit

- Acknowledge Alarms, Supervisories, Troubles and Securities at the panel.
- Silence the panel.
- Reset the panel.

Devices

- Add devices to the database using FXS901-U2 configuration tool.

Menu Functions

- Use panel menu functions.
- Configure and print reports.
- View and change detector sensitivities.
- Enable and disable points.

Desigo Fire Safety Configuration Tool (FXS901-U2)

- Create a Desigo Fire Safety configuration.
- Transfer configurations to the Desigo Fire Safety system.

Basic System Operation

- Install and navigate through the FXS901-U2 software.

Programming Steps

- Use the steps from project specifications to compiling your configurations.

Control Functions

- Understand basic and complex control logic including inputs and outputs.
- Understand control logic and timer functions.

Workshop Exercises

- Operate and test the Desigo Fire Safety system.
- Test and inspect a Desigo Fire Safety system per NFPA 72 standards.
- Apply the programming steps.
- Design a Desigo Fire Safety system configuration.



FIS 9104 Desigo Fire Safety UL 250/500 PT Panel

(3.5 days)

Learn to install, operate, maintain, test, troubleshoot and wire a Desigo Fire Safety system using a 250/500 point panel. Students will also learn to design, modify, test and otherwise use the Desigo Fire Safety custom system software logic configuration tool (FXS2002-U2) and how to use the software logic to design a Desigo Fire Safety system.

TOPIC:

YOU WILL LEARN TO:

Basic Control Unit

- Acknowledge Alarms, Supervisories, Troubles and Securities.
- Silence and reset the panel.

Basic System Operations

- Install and navigate through the FXS2002-U2 software.
- Apply Desigo Fire Safety security.

Devices

- Install field devices.
- Add devices to database using FXS2002-U2 configuration tool.

Menu Functions

- Use panel menu functions.
- View and change detector sensitivities.
- Enable and disable points.

Desigo Fire Safety Configuration Tool (FXS2002-U2)

- Create a Desigo Fire Safety configuration.
- Transfer configuration to the Desigo Fire Safety system.
- Understand updating panel and module firmware.
- Use the steps to compile your configurations.
- Understand basic and complex control logic.
- Understand control logic and timer functions.
- Create detection zones.

Workshop Exercises

- Operate, test and inspect the Desigo Fire Safety system.
- Troubleshoot a Desigo Fire Safety system.
- Apply the programming steps.
- Design a Desigo Fire Safety system configuration based on given specifications.

COURSE LENGTH:

Four days ending at noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing, maintaining or programming a Desigo Fire Safety system or for administering the FXS2002-U2 configuration tool.

PREREQUISITE:

Working knowledge of addressable fire alarm systems and IBM computers is assumed. Students must complete web-based training before attending this class – FIS 900 Desigo Fire Safety System Overview.

CEUs:

2.7 CEUs



FIS 9502 Cerberus PRO UL 50 PT Panel (1.5 days)

Learn to install, operate, maintain, test, troubleshoot and program the Cerberus PRO 50-point panel system (FC901). The custom software, FXS901-U3 configuration tool, will be used to transfer customer programs to the Cerberus PRO system. Changes will be made to installed software during the course.

COURSE LENGTH:

Two days ending at noon on the last day.

PARTICIPANTS:

Persons responsible for engineering, installing or maintaining a Cerberus PRO system.

TOPIC:

YOU WILL LEARN TO:

Basic Control Unit

- Acknowledge Alarms, Supervisories, Troubles and Securities at the panel.
- Silence the panel.
- Reset the panel.

Devices

- Add devices to the database using FXS901-U3 configuration tool.

Menu Functions

- Use panel menu functions.
- Configure and print reports.
- View and change detector sensitivities.
- Enable and disable points.

Cerberus PRO Configuration Tool (FXS901-U3)

- Create a Cerberus PRO configuration.
- Transfer configurations to the Cerberus PRO system.

Basic System Operation

- Install and navigate through the FXS901-US software.

Programming Steps

- Use the steps from project specifications to compiling your configurations.

Control Functions

- Understand basic and complex control logic including inputs and outputs.
- Understand control logic and timer functions.

Workshop Exercises

- Operate and test the Cerberus PRO system.
- Test and inspect a Cerberus PRO system per NFPA 72 standards.
- Apply the programming steps.
- Design a Cerberus PRO system configuration.

PREREQUISITE:

Working knowledge of addressable fire alarm systems and IBM computers is assumed. Students must complete web-based training before attending this class – FIS 950 Cerberus PRO System Overview.

CEUs:

1.10 CEUs



FIS 9504 Cerberus PRO UL 250/500 PT Panel (3.5 days)

Learn to install, operate, maintain, test, troubleshoot and wire a Cerberus PRO system using a 250/500 point panel. Students will also learn to design, modify, test and otherwise use the Cerberus PRO custom system software logic configuration tool (FXS2002-U3) and how to use the software logic to design a Cerberus PRO system.

TOPIC:	YOU WILL LEARN TO:
Basic Control Unit	<ul style="list-style-type: none">• Acknowledge Alarms, Supervisories, Troubles and Securities.• Silence and reset the panel.
Basic System Operations	<ul style="list-style-type: none">• Install and navigate through the FXS2002-U3 software.• Apply Cerberus PRO security.
Devices	<ul style="list-style-type: none">• Install field devices.• Add devices to database using FXS2002-U3 configuration tool.
Menu Functions	<ul style="list-style-type: none">• Use panel menu functions.• View and change detector sensitivities.• Enable and disable points.
Cerberus-Engineering Tool (FXS2002-U3)	<ul style="list-style-type: none">• Create a Cerberus PRO configuration.• Transfer configuration to the Cerberus PRO system.• Understand updating panel and module firmware.• Use the steps to compile your configurations.• Understand basic and complex control logic.• Understand control logic and timer functions.• Create detection zones.
Workshop Exercises	<ul style="list-style-type: none">• Operate, test and inspect the Cerberus PRO system.• Troubleshoot a Cerberus PRO system.• Apply the programming steps.• Design a Cerberus PRO system configuration based on given specifications.

COURSE LENGTH:
Four days ending at noon on the last day.

PARTICIPANTS:
Persons responsible for engineering, installing, maintaining or programming a Cerberus PRO system or for administering the FXS2002-U3 configuration tool.

PREREQUISITE:

Working knowledge of addressable fire alarm systems and IBM computers is assumed. Students must complete web-based training before attending this class – FIS 950 Cerberus PRO System Overview.

CEUs:

2.7 CEUs



SELF-STUDY MATERIALS



FIS 100 Fire Detection and Alarm System Basics

This training explains the basic concepts of fire detection and alarm systems and is presented in five modules: System Basics, System Inputs, System Outputs, System Configuration and Auxiliary Equipment and Systems.

DURATION:

Approximately 2 hours

AUDIENCE:

New fire safety technicians and others who need to understand basic concepts of fire detection and alarm systems.



FIS 150 MXL and MXLV Fire Panels and Components

This training introduces field devices and components of the MXL and MXLV fire safety systems.

DURATION:

Approximately 3 hours

The topics include:

Fire Alarm System Selection, MXL Fire Alarm System Operation, MXL Field Devices, including Detection Devices, Initiating and Signaling Devices and Accessories, MXL Core System Components, and MXL System Components and Options, including Voice and Network Options.

AUDIENCE:

Students must complete this training before attending the FIS 1114 classroom training. This material is also helpful to anyone who needs to understand the MXL or MXLV Fire Safety Systems.



FIS 250 XLS and XLSV Fire Panels and Components

This training introduces the field devices and components of the XLS and XLSV fire safety systems.

The topics include:

Fire Alarm System Selection, XLS Fire Alarm System Operation, XLS Field Devices, including Detection Devices, Initiating and Signaling Devices and Accessories, XLS Core System Components, and XLS System Components and Options, including Voice and Network Options.

AUDIENCE:

Students must complete this training before attending the FIS 2114 classroom training. This material is also helpful to anyone who needs to understand the XLS or XLSV Fire Safety Systems.

NEW FIS 900 Desigo Life Safety UL System Overview

This training introduces the Desigo UL Fire Safety System. Students will learn about the panels and devices available.

The topics include:

What is Desigo, System Overview, FCnet Stations, FDNET Peripherals, Tools and Documentation available.

AUDIENCE:

Students must complete this training before attending the FIS 9102 or FIS 9104 classroom training. This material is also helpful to anyone who needs to understand the Desigo UL Fire Safety System.

NEW FIS 950 Cerberus PRO Fire System Overview

This training introduces the Cerberus PRO Fire System. Students will learn about the panels and devices available.

The topics include:

What is Cerberus PRO, System Overview, C-WEB Panels, C-NET Peripherals, Tools and Documentation available.

AUDIENCE:

Students must complete this training before attending the FIS 9502 or FIS 9504 classroom training. This material is also helpful to anyone who needs to understand the Cerberus PRO Fire System.



DURATION:

Approximately 3 hours



DURATION:

Approximately 1 hour



DURATION:

Approximately 1 hour





**HVAC PRODUCTS:
CLASSROOM TRAINING
SELF-STUDY MATERIALS**





Training Options

Our training course includes labs during which students receive hands-on practice with the Siemens SED2 VFD. If you successfully complete this training course, you will be certified to start up Siemens SED2 VFDs.

How to Enroll

Call 1-800-487-7771.

Lodging and Transportation

Students are responsible for their lodging and transportation when attending training at any location. Hotel and travel recommendations are included in the confirmation letters sent to students after enrolling.

Confirmation

If a confirmation letter is not received three weeks before the class begins, call 1-800-487-7771.

Cancellation policy

Students who cancel within 21 calendar days of the class start date will be charged 50% of the tuition. Students will be charged 100% of the tuition if they cancel the day of the class or do not attend. The cancellation fee may be waived if your organization sends a qualified student as a substitute.

NOTE: Siemens reserves the right to cancel classes and assumes no liability for expenses incurred by students due to class cancellation. All students will be notified of class cancellations.

HVAC Products Training Team



NOEL HIPOLITO
Certified Instructor



JOHN TRABER
Certified Instructor

CLASSROOM TRAINING COURSE

VFD 304 SED2 VFD Certification Program (4 days)

Learn the startup procedures for the SED2 as well as the requirements for proper installation. The operation of the VFD will be explored and both bypass options will be examined. This training includes an introduction to EasyComm software.

When certified graduates of this course commission an SED2, the warranty period is extended from 18 to 24 months. To renew your certification, log on to www.siemens.com/esonline and complete the recertification exam.

TOPIC:

YOU WILL LEARN TO:

Installation

- Inspect an installed SED2 to verify proper installation.

Startup Configurations and Applications

- Quick commission an SED2.
- Perform a factory reset.
- Configure the VFD for: auto restart, pump staging, flying restart, skip frequencies, hibernation, essential services and belt failure detection.
- Configure a drive with bypass for: essential services, interlock start and remote start.
- Configure, backup and restore drive parameter settings, using EasyComm software.
- Run scripts to configure the drive, using EasyComm software.
- Troubleshoot faults and warning codes for drive and drive-with-bypass operations.
- Apply appropriate optional line/load reactor-type devices.

CLASS SCHEDULE:

4 day course - starts on a Tuesday.

COURSE LENGTH:

Four days ending by noon on the fourth day.

PARTICIPANTS:

Persons who install Siemens SED2 variable frequency drives.

PREREQUISITE:

Students must complete VFD 100. This online training module is available at: siemens.com/esonline.

CEUs:

2.7 CEUs

PRICE:

\$1,200 (U.S.)

SELF-STUDY MATERIALS

VFD 100 Introduction to SED2 Variable Frequency Drives

This online training explains the features and functionality of the SED2 drive, applications for which it is suited and the principal safety and environmental considerations.

The topics include:

Features and Functions, Installation Environment Considerations, Extended Storage Conditions and Installation Safety.

AUDIENCE:

Students must complete this online training before attending the VFD 304 classroom training.

DURATION:

Approximately 3 hours



To access this online course, log on to: siemens.com/esonline.

Enroll Today!

Class sizes are limited and early registration is encouraged. Please follow the instructions for enrolling for a class contained in each section of this directory. **Please photocopy this form if you wish to enroll multiple students.** You can also enroll online at www.siemens.com/esonline.

STUDENT INFORMATION

Student Name _____

Student Phone Number _____ Fax Number _____

Email Address _____

Company Name _____

Mailing Address _____ City _____ State _____ Zip _____

Supervisor's Name _____ Supervisor's Phone Number _____

Fax Number _____ Supervisor's Signature _____

WE ARE (choose one): Direct Sales Distributor End User Other

If end user or other,
your supplier is a: Direct Sales Office Distributor Other

Supplier Company Name _____ Contact _____

Mailing Address _____

City _____ State _____ Zip _____

COURSE INFORMATION Building Automation Fire Safety HVAC Products

Course Name _____

Course Number _____

Dates _____ Location _____

PAYMENT INFORMATION

Purchase Order No. _____ Check #/Job # _____

For security reasons if you are paying with a credit card, please provide the name and phone number of the person responsible for payment. We will contact them for the credit card information.

Contact _____

Phone Number _____ Location _____

Branch Contact _____

Email _____

FAX to 847-215-4792 or **EMAIL** to educationservices.industry@siemens.com, or enroll online at www.siemens.com/esonline.

CANCELLATION POLICY:

Students who cancel within 21 calendar days of the class start date will be charged 50% of the tuition. Students will be charged 100% of the tuition if they cancel the day of the class or do not attend. The cancellation fee may be waived if your organization sends a qualified student as a substitute.

NOTE: Siemens reserves the right to cancel classes and assumes no liability for expenses incurred by students due to class cancellation. All students will be notified of class cancellations.



CD Order Form

\$299 EACH

BUILDING AUTOMATION TRAINING

- APOGEE Insight Basics Version 3.10
- DCC 100 Introduction to Desigo CC
- APOGEE Scheduler 2.0
- APOGEE Trending (available on 4/01/13)
- APOGEE Reports 2.0
- Introduction to Terminal Box TECs 2.0
- Introduction to PPCL Programming (available on 5/01/13)
- Introduction to PXC-Modular Field Panel and TX-I/O
- Introduction of the Fume Hood & Laboratory Room Controllers
- Legacy Field Panels - MEC & MBC (available on 4/01/13)

FIRE SAFETY TRAINING

- FIS 100 Fire Detection and Alarm System Basics
- FIS 150 MXL and MXLV Fire Panels and Components
- FIS 250 XLS and XLSV Fire Panels and Components
- FIS 450 Cerberus DMS Overview (available on 3/01/13)
- FIS 900 Desigo Fire System Overview
- FIS 950 Cerberus PRO Fire System Overview

CD TRAINING PACKAGES

- Double:** Pick two of the above CDs \$445
- Triple:** Pick three of the above CDs \$670

PAYMENT INFORMATION

Purchase Order No. _____ Check #/Job # _____

For security reasons if you are paying with a credit card, please provide the name and phone number of the person responsible for payment. We will contact them for the credit card information.

Contact: _____ Phone Number: _____

SHIPPING INFORMATION

Attention To: _____ Name of Organization: _____

Address: _____ City: _____ State: _____ Zip: _____

Email: _____ Phone Number: _____

FAX to 847-215-4792 or **EMAIL** to educationservices.industry@siemens.com.