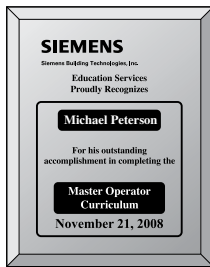


Training Recommendations

Depending on job responsibilities, we recommend these courses:

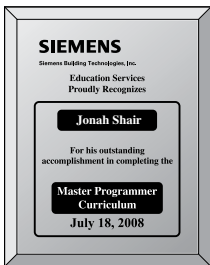
Master Training Paths

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



Master Operator Curriculum

APOGEE Systems	APOGEE with BACnet Systems
5-620	5-720
5-615	5-615
5-625	5-725



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 APOGEE Building Automation Systems	5-620	5-615	5-618	5-625	5-630	5-635	5-645	5-655	5-670	5-700	5-701
For APOGEE with BACnet Building Automation Systems	5-720	5-615	5-618	5-725	5-630	5-635	5-645	5-655	5-670	5-700	5-701
Operate a building automation system.	1	2/3		2/3							
Create or edit programs for building automation system using PPCL.	1				2	3					
Operate field panel(s) or TEC's	1	2									
Manage your facility's energy consumption using your building automation system.	1						2				3
Administer the data from your building automation system using InfoCenter Suite Software.	1							2			
Monitor and control laboratory rooms using Siemens devices	1								2		
Troubleshoot technical systems (generic electrical systems are used in the training).											1
Communicate with LonWorks® devices on your building automation system using Network Management Tool (NMT).	1		2								
Prerequisites	None	5-620 or 5-720	5-620	5-620 or 5-720	5-620 or 5-720	5-620 or 5-720 and 5-630	5-620 or 5-720	5-620 or 5-720	5-620 or 5-720	None	

For **experienced** APOGEE system operators who have attended 5-620 or passed the online test for this 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.

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 that course as a prerequisite. Log onto our training website (www.usa.siemens.com/LearningCenter), if you want more information or would like to take the test.

5-620 APOGEE Workstation Operations (4 days)

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

Topic:	You will learn to:
Distributed Digital Control (DDC)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Navigate through Windows and Insight. Use the Object Selector to retrieve objects from the database. Customize the Insight main menu.
Reports	<ul style="list-style-type: none"> Define and generate APOGEE reports.
Report Scheduler	<ul style="list-style-type: none"> Schedule reports to run automatically. Describe the Scheduler application.
System Profile	<ul style="list-style-type: none"> Explain the system profile and its functions. Unbundle subpoints in a TEC.
Point Editor	<ul style="list-style-type: none"> Modify point definitions. Address points for the Modular Building Controller (MBC) and the Modular Equipment Controller (MEC) and the PXC modular (PXC-M). Discuss slope and intercept.
Alarm Management	<ul style="list-style-type: none"> Manage system alarms.
Commander	<ul style="list-style-type: none"> Monitor and command system points to control building equipment.
Graphics	<ul style="list-style-type: none"> Manage alarms from Graphics. Utilize dynamic information in the Graphics application.
Trend	<ul style="list-style-type: none"> Create trend definitions. Collect trend data.
Equipment Scheduler	<ul style="list-style-type: none"> Schedule events and zones. Override scheduled events and zones.
Dynamic Plotter	<ul style="list-style-type: none"> Generate a dynamic plot to monitor system information.

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.

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: \$1,835 (U.S.)

Classroom Training

"I gained a great deal of knowledge and skill and I have a greater comfort level with controlling my system."

Dave Allar
Wegmans Food Markets, Inc.
Retail Service Center
Pottsville, Pennsylvania

Classroom Training

“This course is essential to learning the APOGEE system.”

Ralph Frantz
John Wayne Airport
Santa Ana, California

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

Learn how 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 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 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 BLN and FLN levels. Describe point addressing schemes for 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 TECs 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.
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), APOGEE with BACnet for Experience Insight Users (5-710) or APOGEE with BACnet Advanced Operations (5-720).

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

5-618 LONWORKS® Communications for APOGEE Field Panel and FLN Operations (4 days)

Learn how to communicate with LMECs (L model Mechanical Equipment Controllers) and LTECs (LONMARK® compliant Terminal Equipment Controllers) using Network Management Tool (NMT).

Classroom Training

Topic:	You will learn to:
Navigating the Network Management Tool (NMT)	<ul style="list-style-type: none"> • Use the network browser to monitor network variables and configuration properties. • Use the network browser to customize reports. • Command network variables and configuration properties to different values. • Verify device status.
System Architecture	<ul style="list-style-type: none"> • Describe where LMECs and LTECs reside in the APOGEE system architecture. • Describe how LONWORKS® Networks interact with the APOGEE system.
LTEC Functionality	<ul style="list-style-type: none"> • Use reports to verify the controlling setpoint. • Use reports to verify the mode and status of the LTEC.
Point Lists	<ul style="list-style-type: none"> • Cross-reference network variable and configuration property values in NMT to APOGEE point values using Terminal Emulation.
PEAK Database	<ul style="list-style-type: none"> • Access and store the PEAK Database. • Transfer the PEAK Database.
Insight Workstation	<ul style="list-style-type: none"> • Use Insight to run reports on an LTEC. • Describe how to interact with the PEAK Database using Insight. • Use Graphics to monitor and command LTEC subpoints.

Note: This course teaches Network Management Tool (NMT) and Insight software.

Course Length: Four days ending by noon on the fourth day.

Participants: System users who need skills to communicate with their APOGEE with support for LONWORKS® Networks.

Prerequisite: APOGEE Workstation Operations (5-620).

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

Classroom Training

“I especially liked the instructor’s ability to relate course material to field situations.”

LB&B Associates, Inc.
Camden, New Jersey

5-625 APOGEE Advanced Operations (4 days)

Learn how 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 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).

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

5-630 APOGEE PPCL Programming (4 days)

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

Topic:	You will learn to:
PPCL Syntax	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Create flowcharts for new and existing programs.
Program Editor	<ul style="list-style-type: none"> Describe and use the features of the Program Editor. Use various navigational tools in Program Editor.
Troubleshooting	<ul style="list-style-type: none"> Use Report Builder to test and troubleshoot programs.
Point Control	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Write PPCL code to command FLN devices.

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

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

Classroom Training

“The instructor had a very easy-going demeanor. It made exchanging ideas with him and the other students pleasant.”

Jeff Gagen
Jones Lang LaSalle
Chicago, Illinois

Classroom Training

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 is 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.

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 APOGEE with BACnet for Experienced Insight Users (5-710), APOGEE with BACnet Advanced Operations (5-720), and APOGEE PPCL Programming (5-630).

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

“The instructor was well versed in the subject. This course provided ideas that I can immediately use in my business.”

Joe Parisi
Ford Motor Company
Dearborn, Michigan

5-645 APOGEE for Energy Management (4 days)

Learn how an APOGEE system can manage and conserve energy.

Topic:	You will learn to:
Energy Usage and Conservation	<ul style="list-style-type: none"> Identify variable costs on different types of utility bills. Understand energy measurement methods and units of measure. Understand energy conversion factors. Identify regulations and requirements for Energy Star rating, LEED (Leadership in Energy and Environmental Design) Green Building Rating System™, and ASHRAE recommendations. Review your current energy usage and identify potential improvements using the ENERGY STAR website's Portfolio Manager tool. Calculate energy cost savings potential. Use APOGEE trending data to evaluate energy usage.
Energy Monitoring and Reporting	<ul style="list-style-type: none"> Use sub-metering information to monitor and manage energy costs. Generate energy reports using APOGEE. Evaluate load profiles to identify areas for improvement via APOGEE exported reports.
Energy Management through Scheduling	<ul style="list-style-type: none"> Use the Scheduling function to conserve energy. Identify SSTD parameters for implementation. Verify proper execution of your building's schedule.
Variable Frequency Drives (VFDs)	<ul style="list-style-type: none"> Identify applications for VFDs. Use APOGEE to evaluate the performance of existing VFDs. Identify opportunities for improving VFD implementation.
Resets	<ul style="list-style-type: none"> Evaluate various reset programs to save energy and improve occupant comfort. Verify that the reset program is working properly.
Economizer	<ul style="list-style-type: none"> Apply appropriate economizer programs in different situations. Verify economizer operation and use proper techniques for troubleshooting.
Demand Control Ventilation (DCV)	<ul style="list-style-type: none"> Use DCV to reduce energy consumption in large spaces with partial and variable occupancy loads. Control CO₂ levels with minimum energy usage using DCV.
Direct Digital Control (DDC)	<ul style="list-style-type: none"> Explore the benefits of using accurate energy data collected by DDC equipment and improved control accuracy of DDC systems.

Notes: Students are encouraged to bring the following to class: 12 months of utility bills for their facility, information about the type of facility, and square footage. This class teaches energy management strategies, but does not teach PPCL programming.

Course Length: Four days ending by noon on the fourth day.

Participants: APOGEE users who manage energy consumption and utility costs.

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

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

Classroom Training

"I liked that the instructor took time to make sure that everyone knew the course material and how to use the information to your advantage."

Irving Drayton
National Rural Electric
Cooperative Association
Arlington, Virginia

Classroom Training

5-655 InfoCenter Suite with Utility Cost Manager (UCM) (3 days)

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

Topic:	You will learn to:
System Architecture	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Mount and dismount volumes. • Create new volumes. • Create point groups. • Setup point group security. • Annotate and modify point values.
InfoCenter Points	<ul style="list-style-type: none"> • Identify the different point types and their properties.
InfoCenter Data	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Create customized reports from report templates. • Run reports manually or by schedule.
Utility Cost Manager	<ul style="list-style-type: none"> • Describe system layout hierarchy. • Run various load profile reports. • Monitor energy use and cost.

Course Length: Three days ending by 4:30 PM on the third day.

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

Prerequisite: It is strongly recommended that participants take APOGEE Workstation Operations (5-620) or APOGEE with BACnet Advanced Operations (5-720), and have some PC experience in order to receive maximum benefit from the training.

CEUs: 2.3 CEUs

Price: \$1,835 (U.S.)

5-670 APOGEE Laboratory Controls (4 Days)

Learn how 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:
Fume Hood Overview	<ul style="list-style-type: none"> Define the purpose of a Fume Hood. Identify components of a Fume Hood. Identify Siemens Building Technologies fume hood controls.
Fume Hood Controller (FHC)	<ul style="list-style-type: none"> Describe the function of the 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 Controller (LRC)	<ul style="list-style-type: none"> Describe the operation of a LRC. Describe how a LRC controls room pressurization, ventilation and temperature. Monitor and command subpoints of a LRC.
Room Pressurization Control and Monitoring	<ul style="list-style-type: none"> Describe the sequence of operation for a Room Pressurization Controller. Describe the sequence of operation of the Differential 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.

Course Length: Four days ending by noon on the fourth day.

Participants: Advanced users who need skills to monitor laboratory controls.

Prerequisites: APOGEE Workstation Operations (5-620) or APOGEE with BACnet Workstation Operations (5-720).

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

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)

Classroom Training

“I especially liked the dedication and effort of the instructor to cover all questions. He went out of his way to give us more information”

Alexander Baez
Rockefeller University
New York, New York

Classroom Training

5-700 Principles of Troubleshooting (3 days)

Learn general troubleshooting skills using a sophisticated software simulation program developed by Flight Safety International. During the class, each student will be provided with a PC and simulation software to practice troubleshooting skills. This course teaches an analytical process which can be used to understand any system better. It does not teach how to troubleshoot a specific system.

Topic:	You will learn to:
Introduction	<ul style="list-style-type: none"> • Define troubleshooting.
Logical Approach	<ul style="list-style-type: none"> • Explain how logical thought and communication can improve troubleshooting effectiveness. • Recognize logical relationships. • Identify eight logic symbols. • Determine the output of logic symbols and logical systems with various input combinations.
Paths of Influence	<ul style="list-style-type: none"> • Explain the paths-of-influence concept. • List the functions involved on a simplified diagram of a system. • Identify the paths of influence in a malfunctioning system. • Identify the critical path in a malfunctioning system.
Four-Step Process	<ul style="list-style-type: none"> • List and describe the four steps of troubleshooting. • Explain how a critical path is identified and followed to determine the source of a problem.
Practical Application	<ul style="list-style-type: none"> • Verify the existence of a malfunction. • Distinguish between indications and malfunctions. • Troubleshoot simulated malfunctions.

Course Length: Three days ending by noon on the third day.

Participants: Individuals who need to develop general troubleshooting skills.

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

CEUs: 1.9 CEUs

Price: \$2,095 (U.S.)

NEW 5-701 Sustainability and Environmental Management (2 days)

Learn to improve the sustainability and environmental management of facilities. This class is taught with lectures and case studies.

Classroom Training

Topic:	You will learn to:
Sustainability	<ul style="list-style-type: none"> • Define the term “sustainability”. • Identify and understand sustainability issues, such as: <ul style="list-style-type: none"> - Climate Change and the links to energy management. - Resource conservation and the links to waste minimization. - Safe delivery and storage of hazardous liquids. - Waste management. - Protection of surface water management. • Understand Life Cycle Assessment and Carbon Footprinting.
Environmental Regulatory Requirements	<ul style="list-style-type: none"> • Understand the basic environmental regulatory requirements for managing facilities. • Establish a compliance assurance management system.
Green Standards	<ul style="list-style-type: none"> • Understand the various options for voluntary schemes such as ENERGY STAR® and LEED®. • Understand the registration process and partnership opportunities. • Understand how to capitalize on the value of voluntary schemes.
Business Implications	<ul style="list-style-type: none"> • Quantify the true sustainability costs and savings for projects. • Present a business case. • Identify opportunities to reduce facility costs through improved energy management practices.
Sustainability Performance Improvements	<ul style="list-style-type: none"> • Identify what constitutes a green building • Identify opportunities for improved sustainability performance, such as reduction of energy consumption and waste. • Apply Lean Six Sigma methodologies to improve sustainability performance. • Establish a green office/transport program.
Sustainability Performance Measurement	<ul style="list-style-type: none"> • Establish a performance measurement system with goals and track performance.

Course Length: Two days ending by 4:30 PM on the last day.

Participants: Facility managers and other personnel who are responsible for energy management.

Prerequisite: None

CEUs: 1.4 CEUs

Price: \$895 (U.S.)

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

Classroom Training

Learn how to monitor and control your building with an 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 default BACnet Command Priority Array.
User Accounts	<ul style="list-style-type: none"> Add objects to Access Groups. Setup the Command Settings for BACnet Command Priorities.
Event Builder	<ul style="list-style-type: none"> Create a BACnet Command object.
Scheduler	<ul style="list-style-type: none"> Schedule reports to run automatically. Describe the Scheduler application. Add BACnet Calendars and Schedules. Add an Exception to a BACnet Schedule.
Trend	<ul style="list-style-type: none"> Use the Trend Wizard to place points in trend. Run Trend Reports.
Graphics	<ul style="list-style-type: none"> Use information block groups to monitor point information.
Commander	<ul style="list-style-type: none"> Set and relinquish system points.

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 that they attend 5-720 to receive maximum benefit from the training.

Prerequisite: APOGEE Workstation Operations (5-620).

CEUs: 2.7 CEUs

Price: \$1,835 (U.S.)



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

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

Classroom Training

Topic:	You will learn to:
Distributed Digital Control (DDC)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Navigate through Windows and Insight. Use the Object Selector to retrieve objects from the database. Customize the Insight main menu.
Reports	<ul style="list-style-type: none"> Define and generate APOGEE reports.
Scheduler	<ul style="list-style-type: none"> Schedule reports to run automatically. Describe the Scheduler application. Add BACnet Calendars and Schedules. Add an Exception to a BACnet Schedule.
System Profile	<ul style="list-style-type: none"> Explain the system tree and its functions. Unbundle subpoints in a TEC.
Point Editor	<ul style="list-style-type: none"> Modify point definitions. Address points for the Modular Building Controller (MBC) and the Modular Equipment Controller (MEC).
Alarm Management	<ul style="list-style-type: none"> Manage system alarms.
Commander	<ul style="list-style-type: none"> Monitor and command system points to control building equipment.
Graphics	<ul style="list-style-type: none"> Manage alarms from graphics. Utilize dynamic information in the Graphics application.
Trend	<ul style="list-style-type: none"> Create trend definitions. Collect trend data.
Dynamic Plotter	<ul style="list-style-type: none"> Generate a dynamic plot to monitor system information.

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.

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: \$1,835 (U.S.)

Classroom Training

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

Learn how 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 default 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 BLN user accounts. Assign privilege levels to user accounts. Add objects to Access Groups. Setup the Command Settings for BACnet Command Priorities.
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: \$1,835 (U.S.)