Siemens PCS 7 DCS Training

DATE & LOCATION:
January 24-28, 2022
8:30 am-5:00 pm
Trident Automation's Corporate Office

COST:
$2,800.00 per person. * +
Cost does not include travel and living.

HOW TO REGISTER:
Contact Megan Sjoberg at
msjoberg@tridentautomation.com
or 920.759.7477

A minimum of three students is required for the course to take place. Trident Automation reserves the right to reschedule or cancel the class if the minimum number of students is not met, unless special arrangements are made in advance.

CANCELLATION:
If we receive notification of cancellation 14 days before the start date of scheduled training, a refund will be issued, except for a $100.00 cancellation fee (per registered person). If notification of cancellation is received 13 days or less before the start date of scheduled training, registrant's company forfeits the registration fee and zero refund is issued.

If Trident Automation cancels a course with no reschedule date planned; a full refund will be issued.

TARGET AUDIENCE:
This course is intended for Plant Maintenance, Engineers, Technicians, and Managers that would like the ability to configure and troubleshoot a Siemens PCS 7 system.
Knowledge in computers and automatic controls is required.

COURSE DESCRIPTION:
This course will explore working in a Siemens PCS 7 Control System, much like what would be found in a currently operating plant.
Subjects include backing up the system (archiving), troubleshooting field IO issues, editing the HMI and performing basic programming and system configuration.
The student will be required to configure various basic control system building blocks such as motor loops, PID controllers and discrete indicators, etc., in a Siemens PCS 7 system and ultimately provide an interface on the operator stations that will allow control of those configurations.
Exercises will range from adding IO points and configuring the code to editing the graphics and downloading to the servers.

* Customers with a Support Agreement may receive 10% off the cost of training for the duration of their specified agreement.
\+ If purchasing the training course via Trident Automation's online store with a credit card, there will be an additional convenience fee added to the cost of the course per person. Please contact Megan Sjoberg at msjoberg@tridentautomation.com for more information on how to purchase via online.

Trident Automation
THE INTEGRATION OF INNOVATION
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SIEMENS PCS 7 GENERAL COURSE OBJECTIVES

Simatic Manager

Upon completion of this lesson, you will be able to:

- Identify the major components of the Simatic Manager
- Navigate the Step7 project structure
- Access the Step7 help systems
- Perform project archive
- Identify the Plant Hierarchy and how it relates to the overview screen.
- Discuss typical network architectures i.e. Plantbus, Terminalbus, etc.

HW Config

Upon completion of this lesson, you will be able to:

- Identify and state the purpose of any module.
- Identify the field and system connections to each module.
- Discuss the Profibus and Profinet communication network.
- Identify the basic hardware components: CPU, IO modules, OLM's, diagnostic repeaters, Y-Links, and cabling.
- Locate PCS 7 IO modules based on logical addressing in HW Config.
- Describe the purpose and relationship between Control, I/O and Communications modules.
- Describe the redundancy options available with PCS 7.
- Describe the options available for accessing data in the control system from other controllers and/or the Human Machine Interface.
- List the modules available for the PCS 7 system, and describe the purpose of each.
- Open an existing PCS 7 system on and off-line.
- Add multiple types of IO modules using the HW Config Catalog.
- Configure I/O modules.
- Discuss HART variables.
- Add I/O to the symbol library.
- Use the HW Config to view CPU and IO module errors.
- Edit and move I/O (symbols) as required by the field wiring.
- Describe how PCS 7 uses OB's and PIP's to scan the program.
- Change the IO PIP's.
- Understand CiR in relationship to CPU memory space.
- Check any system errors.
- Establish and change the time of day.
- Check system error logs for past errors
- Check memory and resource usage.

CFC Configuration

Upon completion of this lesson, you will be able to:

- Describe the components of a CFC (Continuous Function Chart).
- Discuss the CFC Editor and how to use it.
- Describe how information is passed between CFC's.
- Understand and utilize blocks from the APL (Advanced Process Library).
- Explore various CFC block types.
- Change parameters within CFC blocks.
- Access the symbol table.
- Create a CFC.
- Describe and perform compile and download of CFC to the CPU.
- Discuss cross reference to find IO in CFCs for troubleshooting.

SFC Configuration

Upon completion of this lesson, you will be able to:

- Describe the components of a SFC (Sequential Function Chart).
- Discuss the SFC Editor and how to use it.
- Explore the various SFC elements and their uses.
- Identify multiple ways of linking to Chart parameters.
- Discuss the rules of downloading SFC's.

WinCC Explorer and Graphics Designer

Upon completion of this lesson, you will be able to:

- Compile the OS server.
- Open WinCC Explorer
- Activate a Project
- General Knowledge of the Editors
- Open Editors
- Identify Computer Name and Runtime Configuration
- Understand Project Editor Functions
- Find where Tags are used in the project
- Locate and Implement Tags for an Object
- Open Graphic Designer
- Create/Edit Customized Objects
- Display Toolbars
- Configure Grid settings
- Align objects on a screen
- Position objects within a layer
- Use Help functionality
- Display Object Properties
- Add Dynamics to an object
- Add a mouse action to an object
- Link an object using a Dynamic Wizard
- Identify Wizards
- Use items from the Object Palette
- Insert a Graphic Object on a screen
- Open the Global Library
- Place objects from the Global Library on a screen
- Understand Block Icons

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