Siemens HMI with WinCC Comfort/Advanced Outline

This two day course will provide students the skills necessary to develop and maintain applications with the Siemens TIA Portal WinCC Comfort/Advanced software.

Course Length & Time: Two days. 8:30 AM - 4:30 PM

Topics:
- WinCC Comfort/Advanced HMI System Overview
- Siemens HMI Panel Overview
- WinCC flexible Migration to Comfort/Advanced
- Project Creation
- Communication Setup
- Graphics Design
- Library Utilization
- Alarm System
- Tag Logging
- Recipe Management
- User Administration
- VB Scripting
- Cross Reference
- Multi-Language Setup
- Project Transfer
- TIA Portal Step 7 Integration
- WinCC Comfort/Advanced Options:
    - Sm@rt Server
    - Audit

Prerequisite: None
Part # PCC-TRN-SCH2-HMTP

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

Siemens WinCC Unified Outline

This two day course will provide students the skills necessary to develop and maintain applications with the Siemens TIA Portal WinCC Unified software.

Course Length & Time: Two days. 8:30 AM - 4:00 PM

Topics:
- WinCC Unified HMI System Overview
- Siemens HMI Panel Overview
- Project Creation
- Communication Setup
- Graphics Design
- Library Utilization
- Alarm System
- Tag Logging
- Recipe Management
- User Administration
- Scripting
- Cross Reference
- Multi-Language Setup
- Project Transfer
- TIA Portal Step 7 Integration

Prerequisite: None
Part # PCC-TRN-SCH2-WUNI

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

Siemens S7-1500 Programming with TIA Portal Outline

This fast paced three day course assumes the student has a basic knowledge of programming PLCs and focuses on how to use TIA Portal Step 7 Professional software to create a complete PLC system. The focus includes configuration of the Siemens S7-1500 PLC hardware, PROFINET configuration, programming using ladder logic and basic diagnostic functions

Course Length & Time: Three days. 8:30 AM - 4:30 PM

Topics:
• S7 Family Hardware Overview
• TIA Portal Project and Portal Views
• Configuring the S7-1500 PLC Hardware
• Configuring a PROFINET Network
• S7-1500 Addressing & Memory
• Using Various Programming Methods (Linear, Partitioned, Structured)
• Using Basic Instruction Set (Contacts, Coils, Timers, Counters)
• How To Use Function (FC) & Function Block (FB)
• Using IEC Functions & Function Blocks
• Using Libraries
• Using Simatic Automation Tool
• Data Block Usage & Data Types
• Understanding the Most Used Organization Blocks
• Analog Value Processing
• Monitoring Logic & Using Watch Tables
• Use of Trace
• Online Diagnostics & Troubleshooting
• Use of PLCSIM Simulation Tool
• Using the Integrated Web Server on the PLC
• Using a Multi-Instance Function Block (Time Permitting)

Prerequisite: Basic Understanding of PLCs, Successful Completion of Siemens Basics of PLCs Online Course - https://www.sitrain-lms.com/STEP.aspx

Part # PCC-TRN-SCH3-15TP

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

Siemens S7-1200 Jumpstart with TIA Portal Outline

This one day course is a fast paced jumpstart to programming the S7-1200 PLC with TIA Portal Step 7 Basic software. It is assumed that the student is already familiar with programming PLCs and wants to understand how the TIA Portal Software can be used to program the S7-1200 PLC.

Course Length & Time: One day. 8:30 AM - 4:30 PM

Topics:
• S7-1200 Family Hardware Overview
• TIA Portal Project & Portal Views
• Configuring the S7-1200 PLC Hardware
• S7-1200 Addressing & Memory
• Using Basic Instruction Set (Contacts, Coils, Timers, Counters)
• Using Simatic Automation Tool
• Function (FC) & Function Block(FB)
• Data Blocks (DB) & Data Types
• Monitoring Logic & Using Watch Tables
• Online Diagnostics & Troubleshooting
• Using the Integrated Web Server on the PLC
• Configuring a PROFINET Network

Prerequisite: Basic Understanding of PLCs
Part # PCC-TRN-SCH1-12TP

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

Siemens Step 7 Classic for Maintenance Personnel Outline

This three day course assumes the student has a very basic understanding of PLCs and will introduce students to the Step 7 software package, used to program and maintain the S7-300/400 PLC systems. The class focuses on maintaining & troubleshooting the S7 PLC using Step 7. The student will spend the last hour of the class using what was learned to troubleshoot an actual faulted PLC system.

Course Length & Time: Three days. 8:30 AM - 4:30 PM

Topics:
- S7 Family Hardware Overview
- S7 Hardware Installation & Maintenance
- Remote I/O Installation & Maintenance
- Using Simatic Manager
- Editing/Adding Symbols to a Project
- Viewing the S7 PLCs Integrated Web Server
- Overview of PROFIBUS & PROFINET Networks
- Using a Variable Table for Troubleshooting
- Overview of S7 Addressing
- Why Various Programming Methods Are Used (Linear, Partitioned, Structured)
- Basics of Organization Blocks
- Basics of Functions (FC) & Function Blocks (FB)
- Basics of Data Blocks
- Monitoring PLC Program Blocks
- Overview of Basic Instruction Set (Contacts, Coils, Timers, Counters)
- Overview of IEC Functions & Function Blocks
- What Are Libraries Used For
- Rewiring a User Program
- Comparing Programs
- Using Cross Reference, Usage Table & Program Structure Tools
- Troubleshooting a S7 PLC Using LEDs
- Troubleshooting a S7 PLC Using Step 7
- Troubleshooting a S7 PLC Using the Integrated Web Server
- How to Force a Value
- Documenting, Saving & Archiving Projects

Prerequisite: Basic Understanding of PLCs | Part # PCC-TRN-SCH3-S7CM

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

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Siemens Safety with Step 7 Classic Outline

This one day course assumes the student has had either S7 PLC Programming or S7 PLC Maintenance training. The class will provide the skills necessary to develop and maintain applications using the S7 Distributed Safety System.

Course Length & Time: One day. 8:30 AM - 4:30 PM

Topics:
- Safety Systems & Standards Overview
- Safety Hardware & Why It Is Considered Safe
- How to Connect Sensors & Actuators to the System
- Safety Program Architecture/Structure
- Configuring the Hardware in Step 7
- Programming a Safety Program
- Transferring Data Between the Safety & Standard Program
- How to Properly Reset the I/O after a Failure
- Distributed Safety Library Blocks
- Testing and Diagnostics of the Safety System
- How to Calculate Monitoring & Response Times of the Safety System

Prerequisite: None
Part # PCC-TRN-UNSCH1-SF7P

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

Introduction to Visual Basic Scripting Language (VBScript) Outline

This one day course will provide students with an introduction to Visual Basic Scripting Language (VBScript). The focus will be on learning VBScript. VBScript is used in Siemens HMI products as well as many other applications.

Course Length & Time: One day. 8:30 AM - 4:30 PM

VBScript Introduction
- VBScript defined
- Windows Script Host (WSH) Environment
- Visual Basic Family (VB and VBA)

VBScript Basics
- VBScript Statements
- Syntax
- Reserved Words
- Comments
- VBScript Object Model
- Run-Time Objects, Methods and Properties
- Built-in Functions

Variables, Constants, Arrays and Dictionaries
- Dim and Const Statements
- Variant subtypes
- Built-in Constants
- Single and Multiple Dimension Arrays
- Dictionary Objects

Conditional Logic
- Operators
- If and Select Case statements

Processing Collections of Data
- For … Next
- For … Each …Next
- Do … While
- Do … Until
- While … Wend

Working with Different Data types
- Strings
- Numbers
- Date and Time

Procedures for Organizing Code
- Subroutines
- Functions

Error Handling
- Err Object
- On Error Statements
- Debugging methods

Read and Write to Text Files
- Windows File System Objects
- Windows CE File System Objects

Different Scripting Environments
- Siemens WinCC HMI VBScripting
- InteractX VBA Scripting
- Excel
- IE

Prerequisite: None
Part # PCC-TRN-SCH1-VBHS

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

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Siemens WinCC Professional SCADA Outline

This three day course will provide students the skills necessary to develop and maintain applications with the Siemens WinCC Professional SCADA software in TIA Portal.

Course Length & Time: Three days. 8:30 AM - 4:30 PM

Topics:
- WinCC Pro System Overview
- Help System
- Project Creation
- Screen Design
- Menus and Toolbars for Runtime
- Library Utilization
- Faceplates
- Indirect Addressing Methods
- Cross Reference
- Alarm Logging
- Tag Logging
- C Scripting
- VBScript
- Scheduled Tasks
- Recipes
- Reporting
- User Administration
- Multi-Language
- TIA Portal S7 PLC and WinCC Tag Integration
- Communication Channels

Prerequisite: None
Part # PCC-TRN-SCH3-SWCP

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting Kelsey Laager at (262) 251-3000.

Siemens WinCC SCADA V7.x Outline

This three day course will provide students the skills necessary to develop and maintain applications with the SIEMENS WinCC SCADA software.

Course Length & Time: Three days. 8:30 AM - 4:30 PM

Topics:
- WinCC System Overview
- Information System
- Step 7 and WinCC Tag Integration
- Communication Channels
- WinCC Explorer
- Graphics Designer
- Library Utilization
- Customized Objects
- Faceplates
- Indirect Addressing Methods
- Cross Reference
- Alarm Logging
- Tag Logging
- C Scripting
- VBScript
- Reporting
- User Administration
- Multi-Language
- WinCC Diagnostic Tools

Prerequisite: None
Part # PCC-TRN-UNSCH3-WCSP

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

Siemens WinCC flexible Outline

This two day course will provide students with the skills necessary to develop and maintain applications with the WinCC flexible HMI software.

Course Length & Time: Two days. 8:30 AM - 4:30 PM

Topics:
- WinCC flexible System Overview
- Siemens HMI Panel Overview
- Project Creation Methods
- Graphics Design
- Library Utilization
- Alarm and Event Message System
- User Administration
- Tag Logging
- Recipe Management
- VB Scripting
- STEP 7 Integration
- Tag Importing
- Advanced Editing Features
- Multiplexing Methods
- Cross Reference
- Rewiring
- ProTool Migration to flex
- WinCC flexible Options:
    - Sm@rt Access,
    - Sm@rt Service
    - OPC Server
    - Audit

Prerequisite: None
Part # PCC-TRN-UNSCH2-WCFP

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

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Siemens LOGO! Training Outline

This one day course will introduce students to Siemens LOGO! Hardware and LOGO! Soft Comfort Software for programming the LOGO! devices. Students will obtain a foundation for creating, editing, commissioning and operating LOGO! programs.

Course Length & Time: One day. 8:30 AM - 4:00 PM

Topics:
- LOGO! Hardware Family Overview
- LOGO!Soft Comfort Software Overview
- Installing LOGO!
- Wiring LOGO!
- Connecting Inputs and Outputs
- Programming Circuits in FBD and LAD Languages
- Digital Signals
- Analog Signals
- Basic Instructions (AND, OR, XOR, NOT etc.)
- Special Functions (Timers, Counters and Analog Processing)
- Message Texts
- LOGO! Display
- Enabling Web Server
- Parameterizing Mode for setting Block Parameters
- Simulating Program without Hardware
- Testing and Debugging
- Uploading and Downloading
- Saving and Archiving Programs

Prerequisite: None
Part # PCC-TRN-SCH1-LOGO

Complete training schedule can be found at www.pccweb.com/education | Registration can be done online or by contacting PCC at (262) 251-3000 or emailing training@pccweb.com.

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