

PLC485: SIEMENS PCS7 Training Course

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Duration:

Online / Remote training course: 4 Days (6 hours per day)

Audience: Process control engineers, Advanced process control engineers, Instrument engineers and DCS / PLC technicians.

Training course description:

This process control training course is designed to cover all basics and advanced functions of SIEMENS PCS7. Trainees need to have some PLC programming experience as covered in the training course.

All basic and advanced functions necessary to create a complete PLC control logic using function blocks and/or ladder logic will be explained and demonstrated.

Using the Siemens PCS7 software, the trainees will learn how to configure PCS7 and design the visualization system (HMI or SCADA) predominantly WinCC. They will learn how to build tags, design PID and cascade control loops, build and test advanced process control loops and logic, create bumpless transfer in PCS7 and batch control system using Simatic Batch Control center.

Also, the trainees will learn how to build graphics, alarms, trends and logs within WinCC. All designed functionalities will be demonstrated using simulators and runtime emulators.

The goal of this process control training course is to teach and demonstrate how to build all process control logics inside PCS7. Moreover, this process control training course will give you knowledge and experience to build visualization system in WinCC.

Learning outcomes:

Trainees get a chance to learn how to:

- Configure and setup basic and advanced process control logic within Siemens PCS7.
- Tune any PID controller and / or complex control logic using bumpless transfer.
- Design and configure WinCC and understand its functionalities such as tag creation, alarms configurations, designing of static and dynamic graphics, trends, logs.
- Configure Simatic Batch Control Center and utilize its associated modules such as Batch start co-ordinator, Batch Control Server, Recipe Editor, and Advance report and Interface Block.

Training course program:

Day	Topics
1	<ul style="list-style-type: none"> • Introduction on Industrial Automation • Controllers available in Industrial Automation • Introduction on PLC/RTU, SCADA, DCS and it's functionalities • Introduction on Siemens controllers • Overview of PCS7 • PCS7 software installation and configuration • Configuration of Simatic Manager for various types of IO signals • Assignments and practice
2	<ul style="list-style-type: none"> • Programming languages available in IEC61131-3 • Communication between Simatic Manager and external applications. • Programming of timers, counters and various arithmetic logic • Creation of permissive and interlocks logics • Introduction to process logics • PID Controller and its advantages • Design and tuning of various PID controllers. • Configure PV and OP tracking for bumpless transfer • Assignments and practice
3	<ul style="list-style-type: none"> • Introduction of AS-OS server and it's configuration • Introduction to WinCC and it's configuration • Designing of static process graphics and popup screens in WinCC • Configuration of multiple stations, and creation of tag database in WinCC • Configuration of alarms, warnings, historian, logs, and trends in WinCC • Designing of dynamic graphics, recipe logic and scripts in WinCC • Assignments and practice
4	<ul style="list-style-type: none"> • Introduction on batch processing • Installation and configuration of SIMATIC BATCH Control Center (BatchCC) • Overview of Batch start co-ordinator, Batch Control Server, Recipe Editor, and Advance report and Interface Block • Final assessment