

## SIMATIC PCS 7 AS-Engineering (Face-to-face Training) (ST-PCS7ASE)

### Short Description

In this classroom training you will learn about the possibilities of the process control software SIMATIC PCS 7, with the focus on professional engineering of the automation system.

The focus is on application of the various type/instance concepts in SIMATIC PCS 7, which support efficient AS engineering, including working with process tag types and control module types, application of SFC types and technological engineering with equipment modules and equipment phases. With the help of Logic Matrix from PCS 7, you will create complex interlock functions in your user program quickly and easily.

Through practical exercises on training devices, which are handled the same as in real-world use, you will put your newly acquired theoretical knowledge into practice.

### Objectives

After this course you will be able to...

- optimally and efficiently configuration of your process automation.
- use mass data with Control Module Types (CMTs) and their instances using technological engineering.
- design your system and configure the hardware.
- configure the Logic Matrix and set up the visualization in the OS.
- use the main engineering tools for the creation of the type-instance concepts.
- apply the type-instance concept for SFC-Type`s.
- use the technical equipment with "Equipment Module Types" and the technical functions "Equipment Phases Types", as well as the corresponding visualization in a structured way.
- synchronize changes in master data libraries and projects.
- use Shared Equipment and to configure the assignment logic of an EPH to allocate a shared EM according to the requirements

### Target Group

- Project manager, project staff
- Technologists
- configuring engineers, programmer
- Commissioning engineers

### Content

- Project management
  - Multiproject and multiuser engineering: Configuring in the network
  - Update of block types in Run (TCiR)
  - Comparison and versioning of project versions with Version Train and Version Cross Manager
  - Licenses and configuration limits in PCS 7 as well as the current license model with the CPU 410-5H
- Type/instance concepts with control modules and technological list editor
  - Basics of the type concept with control module types
  - Configuring of control module types
  - Bulk data processing with the technological list editor
  - Variants of control modules based on optional blocks
  - Synchronization behavior
- System layout and hardware configuration
  - Memory concept and system architecture
  - Important CPU settings and response to maximum cycle time violation
  - Updating of the HW Catalog
  - Time synchronization
  - Current redundancy concepts of PCS 7
- Configuring of interlocks with the SIMATIC PCS 7 Logic Matrix
  - Positioning, definition of terms and signal processing
  - Engineering and visualization of SIMATIC Logic Matrix
- Sequential control systems with SFC types
  - Calculations, state logic and state transitions in the SFC
  - Basics and configuring of SFC types
  - Change of control strategy and setpoints for an SFC instance
- Technological Engineering
  - Definition of terms
  - Type/instance concept for the engineering of equipment modules and equipment module types
  - Type/instance concept for the engineering of equipment phases with equipment phase types
  - SFC visualization of the equipment phase / equipment module / control module
  - Synchronizing of changes in master data library and project
- Shared equipment
  - Possible combinations with shared equipment
  - Configuration and handling of the assignment logic
  - Allocation strategies

- Routing of values

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**Prerequisites**

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- Basic knowledge of electrical engineering, control and feedback control systems and process control engineering.
- Attendance of the system course "[ST-PCS7SYS](#)" is recommended
- Practical experience in the project planning of SIMATIC PCS 7

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**Note**

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Course language is English

After attending this course, you can be certified as a "Siemens Certified SIMATIC PCS 7 Engineer".  
Book your participation here => [Siemens Certified SIMATIC PCS 7 Engineer](#)

This theoretical and practical proof of performance tests your advanced SIMATIC PCS 7 knowledge.  
After passing the exam, you will receive a certificate.

Included in the course price: Free access to the digital learning platform [SITRAIN access](#) – starting one week before the start of the course until two weeks after the end of the course.

With the Learning Membership, you can deepen or repeat the content of this Learning Event as well as continue your education on other interesting topics.

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**Type**

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Face-to-face training

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**Duration**

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5 days

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**Language**

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en