SIEMENS

PCS7 Advanced AS Engineering (ST-PCS7ASE)

Short Description

In this course, SIMATIC PCS 7 users will become familiar with the possibilities of the SIMATIC PCS 7 process control software with an emphasis on the AS.

Objectives

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 SIMATIC PCS 7 Logic Matrix, 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. This will increase your learning success.
After the course, you will be able to optimally and efficiently configure process automation.

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 concept, process tag type and IEA
- Bulk data processing with the Import/Export Assistant (IEA) and IEA file editor
- Changes to process tag type and synchronization of process tags
- Adaptation of existing charts as process tags (branches)
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 SFC configuration
- 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

Prerequisites

Completion of the ST-PCS7SYS course is recommended
Basic knowledge of process control engineering
Practical experience in configuring SIMATIC PCS 7
Basic knowledge of APL, as conveyed in the system course or in the Library workshop (ST-PCS7LIB)
You can use the available online entrance test to ensure that the selected course corresponds to your level of expertise.

Note

Course documentation : English
Instructor : English

Type

Face-to-face training

Duration

5 days

Language

de, en, fr, nl