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# SIMATIC PCS 7 Introduction of APC-Functions (ST-PCS7APC)

## Objectives

Advanced process control (APC) is being increasingly offered to users directly within process control systems. As a user of SIMATIC PCS 7, this course will provide you with an overview of the possibilities for improving the performance of your system using appropriate functions from the SIMATIC PCS 7 APC portfolio. Starting with standard PID controllers, further advanced controller blocks and templates from the APC portfolio will be presented. You will not only be provided with an insight of their fundamental functional principle and application, you will also gain practical knowledge of the relevant control parameters. This nevertheless does not require knowledge of theoretical formulas and calculations. Using exercises on training equipment, during which you can practise operations under real-life conditions, you will be able to implement your theoretically gained knowledge, thus consolidating and increasing the success of your training. The basis for the practical exercises in the course is the APL (Advanced Process Library) of SIMATIC PCS 7. However, the knowledge gained with regard to APC functions is independent of the library. Following the course, you will be able to configure control solutions for process automation optimally and efficiently.

## Target Group

Project managers, project assistant
Programmers
Commissioning engineers, planners
Service engineers, maintenance engineers

## Content

Overview of APC tools in the SIMATIC PCS 7 libraries and APC examples
Control performance management
- Design and principle of operation of the standard PID controller
- Monitoring of control loops using ConPerMon
- Computer-aided optimization of control loops (PID-Tuning)

Split-range control
Cascade control
Smith predictor control for dead time systems
PID control with parameter control dependent on working point (gain scheduling)

## Prerequisites

Attendance of ST-PCS7SYS or ST-PCS7APL course is recommended
Basic knowledge of process control engineering
Practical experience in configuration of SIMATIC PCS 7

## Note

Course documentation: English
Trainer: English and Dutch/French

## Type

Face-to-face training

## Duration

2 days

## Language

en

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