

Siemens Automation Cooperates with Education (SCE) | 02/2026

# SCE Course Contents

Control technology SIMATIC S7 with TIA Portal

TIA Portal course

2 days

## Prerequisites

- Basic knowledge of Windows PC
- Advance Course SIMATIC S7 with TIA Portal

## SCE Learn-/Training Documents

- Programming S7-1200 module: 031-500
- Programming S7-1500 module: 032-500
- Extended programming S7-1200 module: 051-300
- Extended programming S7-1500 module: 052-300

## Contents

- Controllers in automated plants
- Software controller for SIMATIC S7 in TIA Portal
- Design steps and modeling in controlling of process variables
- Quality requirements for the control loop

- Controller structures
- Controller parameters and adjustment procedure
- Controller testing
- Data types at SIMATIC S7
- Mathematical functions and data type conversion
- Reading, outputting and scaling analog values
- Developing a program for two-step controllers in TIA Portal
- Testing the program for two-step controllers and commissioning with processes
- Controller block as software PID controller
- Configuring an SIMATIC S7 station in TIA Portal
- Integrating and configuring the PID controller software in STEP 7 programs with TIA Portal
- Setting and configuring the PID controller software in TIA Portal
- Commissioning the PID controller software with processes

**Note:**

These Learn-/Training Documents are available in the SCE Internet: [siemens.com/sce/module](https://www.siemens.com/sce/module)

This program serves as the reference and guideline for the course, in which we place great value on practical exercises and application examples.

We will of course be pleased to cover any individual suggestions, requests and questions from participants during the event.

Additional SCE courses are available in the SCE Internet: [siemens.com/sce/courses](https://www.siemens.com/sce/courses)

***Increase your automation technology expertise and inspire your students.***

