

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

SCE Course Contents

Basic Course for PLC programming with SIMATIC S7
and TIA Portal

TIA Portal course

2 days

Prerequisites

- Basic knowledge of Windows PC
- Basic knowledge of automation technology

SCE Learn-/Training Documents

- Hardware configuration S7-1200 modules: 011-100 | 011-101 | 011-102
- Hardware configuration S7-1500 modules: 012-100 | 012-101 | 012-105
- Hardware configuration S7-300 module: 013-101
- Process description module: 020-100
- Programming S7-1200 modules: 031-100 | 031-200 | 031-300 | 031-410
- Programming S7-1500 modules: 032-100 | 032-200 | 032-300 | 032-410

Contents

- Field of application and configuration of SIMATIC S7 device types
- Operation and function of SIMATIC S7
- Creating a project with TIA Portal
- Configuring an SIMATIC S7 station in TIA Portal
- Writing, testing and storing program blocks in TIA Portal
- Addressing and program representation (LAD, FBD)
- Program structure and program blocks (OB, FB, FC and DB)
- Basic operation set
- Symbolic addressing
- Online test and diagnostic functions
- Tag declaration in function blocks (FB) and functions (FC)
- Creating a program example with tag declaration and data block
- Standard and system functions (IEC timer/ IEC counter)
- News for programming SIMATIC S7 with TIA Portal

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.

