

## SIMATIC programming with S7-SCL in the TIA Portal (TIA-SCL1)

### Short Description

The Totally Integrated Automation Portal (TIA Portal) provides the working environment for end-to-end engineering with SIMATIC STEP 7 and SIMATIC WinCC. Select this course if you want to program SIMATIC S7 using a high-level programming language. Using simple examples, we will show you the advantages offered by a high-level programming language. The course aims to inform participants about the basis of the language and performance scope of the Structured Control Language (SCL) development environment. During the training course, you will create your own basic SCL programs, commission, and test them. You will also be able to perform diagnostics in SCL blocks.

### Objectives

Following the course, you will be able to:

- Read, understand, expand, test and commission basic programs written in a high-level programming language (SCL).
- Reduce the time spent creating programs for basic applications and reduce the maintenance of basic programs compared to using a Statement List (STL).

You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model.

### Target Group

Programmers  
Commissioning engineers  
Configuration engineers  
Maintenance engineer  
Maintenance personnel  
Service personnel

### Content

Basics of the SCL programming language  
SCL editor  
Data types  
SCL instructions  
Control structures  
Implicit & explicit conversions  
Calling and formulating functions and function blocks in SCL  
Program draft in SCL  
Working with arrays  
Working with tags and symbolic block names  
Introduction to the basic SCL command set  
Creating, commissioning and testing your own SCL programs  
Reinforcement of the content using practical exercises on the SIMATIC S7-1500 system model

### Prerequisites

Knowledge of SIMATIC STEP 7 based on TIA Portal corresponding to TIA-SYSUP, TIA-SERV2 or TIA-PRO1.  
You can use the available online entry test to ensure that the selected course corresponds to your level of competence.

[Online Assessment Test](#)

### Note

In this course you will work with the SIMATIC STEP 7 software based on TIA Portal

### Type

Face-to-face training

### Duration

3 days

### Language

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### Fee

528 EUR  
( price without 20% VAT )