

## Online-Training - SIMATIC Programmieren 1 mit S7-SCL im 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 S7-1500 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.

In order to provide you with the best possible support and training in your personal learning environment (own office/home office), we have implemented selected courses as digital online trainings for you. We provide you with live theory lectures from our experts, which convey the course content described in the learning objectives in a practical and comprehensive manner, utilizing our virtual exercise environment for practical exercises. In our virtual classroom, our expert is also available to you at any time during your individual practical exercises for in-depth questions and technical discussions.

[Also available as face-to-face training](#)

### 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 will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual exercise environment on a TIA plant model. This consists of a SIMATIC S7-1500 automation system, Comfort Panel TP700 and a virtual conveyor belt 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  
Consolidation of the content through practice-oriented exercises in the virtual exercise environment

### 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](#)
- [Technical requirements](#) > VE Lab

### Note

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

### Type

Online-Training

### Duration

3 days

**Language**

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