

## Online-Training - TIA Portal Programming Expert (TIA-PROEXP)

### Short Description

Choose this course if you want to become a SIMATIC S7-1500 expert using a higher level programming language (SCL). You expand your knowledge of the runtime and memory-optimized creation of standardized building blocks for a corporate library. Using a practice-oriented exercise environment with a virtual model of a manufacturing plant, you will deepen your knowledge of the higher programming language.

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.

### Objectives

After attending the course, you can do the following:

- Indirect addressing of optimized data
- Programming of reusable STEP 7 blocks based on IEC 61131-3.
- Create versioning of blocks and user libraries
- Program STEP 7 blocks with program-technical error handling and evaluation
- Develop and implement in-house standards

You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual learning environment. This consists of a virtual model of a production plant with SIMATIC S7-1500.

### Target Group

Programmers

### Content

Reusable building blocks with optimized data access

Indirect addressing of complex data structures by using the parameter types ARRAY\*, VARIANT and REF\_TO

Versioning using typing in the project and global library

Block creation according to the IEC 61131-3

Use of ProDiag to generate block messages

Deepening of the SCL programming language

Deepening of the content through practice-oriented exercises on the SIMATIC S7-1500 and a virtual model of a production plant.

### Prerequisites

SIMATIC S7 knowledge corresponding to TIA-PROADV-LJ, TIA-PRO2 or TIA-SYSUP and practical experience in using the knowledge.

Basic knowledge of the SCL programming language according to TIA-SCL1 is mandatory.

You can use the available online entry test to ensure that the selected course matches your area of expertise.

- [Online Assessment Test](#)
- [Technical requirements](#) > VLab

### Note

In this course you will work with SIMATIC S7-1500 and software SIMATIC STEP 7 based on TIA Portal.

### Type

Online-Training

### Duration

3 days

### Language

en