

## TIA Portal Programmierung Expert (TIA-PROEXP)

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### Short Description

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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.

[Also available as online-training](#)

### Objectives

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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 SIMATIC S7-1500 and a virtual model of a production plant.

### Target Group

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Programmers

### Content

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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

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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](#)

### Note

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

### Type

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Face-to-face training

### Duration

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3 days

### Language

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