SIEMENS

Learning Journey - SIMATIC Programming 1 in TIA Portal (TIA-PRO1-LJ)

Краткое описание

The Totally Integrated Automation Portal (TIA Portal) forms the working environment for integrated engineering with SIMATIC STEP 7. In this learning journey of the SIMATIC TIA Portal programming training, you will learn the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, the configuration and parameterization of the hardware and the basics of classic PLC programming. You will also learn to connect a PROFINET IO.

An optimal mix of guided live modules (online) and self-learning modules will provide you with all of the content imperative for your work and sustainable learning success. Various practical tasks in our virtual exercise environment throughout the learning journey help you to prepare for practical application. The learning journey provides curated on-demand content to support you in your own personal practice transfer..

More information on learning journeys

Цели

After this learning journey you will be able to ...
- operate the "TIA Portal" engineering platform safely
- understand the basics of the interaction of TIA components
- solve simple programming tasks with elementary STEP 7 instructions
- structure small SIMATIC S7 programs with the help of OBs, FCs and FBs
- apply standards and work with them
- solve simple mathematical programming tasks with STEP 7 instructions
- commission simple/small machines or expand them independently
- test programs and fix simple errors
- configure a distributed I/O via PROFINET

You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual learning environment on a TIA system model. This consists of a SIMATIC S7-1500 automation system and a virtual conveyor model.

Целевая группа

Programmers
Commissioning engineers
Engineering personnel

Содержание

The Learning Journey TIA-PRO1-LJ (Level: Basic) consists of:
- 8 live modules (3.5 hours each)
- 17 self-study modules (approx. 12 hours); In addition to the live modules, you should plan about 1 hour of self-study time per day as well as dial-in and follow-up times.
- On-demand themed content
- Individual transfer support in the form of a 1:1 coaching (1 hour)

A learning membership to work through the self-learning modules and access to on-demand content is included for 1 year.

topics
- Overview and essential features of the SIMATIC S7 system family
- Configuration interface of the TIA Portal STEP 7 engineering system
- Program processing in the automation system, program cycle, process image
- Program structuring and its implementation with the STEP 7 block types (OB, FC, FB, DB)
- Binary and digital operations in function and contact diagram (FBD/LAD)
- Apply standards and work with them using the example of libraries
- Implement data management with data blocks
- Programming of reusable and parameterizable blocks
- Test tools for program testing and commissioning: system information, troubleshooting and diagnostics
- Documentation of the created program with the possibilities integrated in TIA Portal
- Deepening of the content through practice-oriented exercises in the virtual learning environment

Требования к участнику

Basic knowledge of automation technology
With the help of the available online entrance test, you will ensure that the course you choose matches your competences.

- Online Assessment Test.

- Technical requirements > VLab

Примечания

Participation in the learning journey is personal and non-transferable.

Тип

Learning Journey

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