

## Siemens Certified Programmer in TIA Portal (CPT-FAP)

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### Short Description

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You will deepen your theoretical knowledge with numerous practical exercises on a SIMATIC plant model on which you also take the examination. This consists of a SIMATIC S7-1500 automation system, ET200SP distributed I/O, Touchpanel TP700, drive SINAMICS G120 and a belt model.

### Objectives

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This course consists of two days of theory as the ideal preparation for a 5 hour examination on the third day! Your skills from SIMATIC programming training (courses TIA-PRO1 - TIA-PRO3) will be refreshed and consolidated. The practical assessment involves the creation and commissioning of a complex PLC program with components of Totally Integrated Automation from SIEMENS. After passing the examination successfully you will receive a recognised certificate that attests your specialist knowledge.

### Content

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Configuration of a SIMATIC controller  
Applicative programming in a complex automation system  
Programs for an automation system consisting of a standard PLC with distributed I/O, standard HMI device and bus system  
Programming in compliance with IEC  
Standardised user blocks  
Creation and application of complex data structures  
Variables of a composite and complex data type  
System blocks  
Indirect addressing of complex data structures and parameters  
Industrial communication  
Error diagnostics in a PROFINET IO system with an HMI device  
Configuration of CPU-CPU communication via Industrial Ethernet  
Human Machine Interface  
Alternative message methods  
Consistent transfer of entire data records (recipe management)  
System error diagnostics with an HMI device  
Motion control  
Connection of drives  
Functional safety technology  
Significance of security technology in the prevention of accidents  
Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model

### Prerequisites

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PC literacy, keyboard/ mouse skills and a working knowledge of MS Windows enabling the participant to:-

Open and Close programs

Locate files

Copy and paste files, objects and data (text, etc.)

Drag and drop files, objects and data (text, etc.)

Use of menus and multi-menus

Manipulate windows within a multi-window environment

Use the Windows help

To enrol on this refresher course and examination module participants must have at least attended the Siemens TIA Portal Programming 3 course (TIA-PRO3).

### Note

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The examination is open book but documentation will not be issued in lieu of any TIA Portal Programming courses not undertaken.

### Type

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Face-to-face training

### Duration

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3 days

### Language

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### Fee

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1,360 GBP