

## TIA Portal Openness Programming 1 (DI-OPEN1)

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### Short Description

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TIA Portal Openness is the API or programming interface provided with the TIA Portal, with which you can efficiently automate engineering tasks without using the TIA Portal itself. This includes tasks such as project management, configuration and parameterization of hardware, automatic generation of block code as well as various online functions. The aim of the course is to provide you with an introduction to programming with C#. You will learn the basics of the range of languages and performance of the Openness API in Visual Studio and how to use the C# programming language. During the training, you will create, commission and test your own simple Openness applications. The course will introduce you to the programming language C# in combination to TIA Portal Openness.

[Also available as online training](#)

### Objectives

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By the end of the course you will be able to:

- Program with Visual Studio and the C# programming language
- Create small applications with TIA Openness

**Please note that this course is a preparation for the course [DI-OPEN2](#) and teaches the trainees the basics of Visual Studio and C#. The actual TIA Portal Openness API is covered in the course [DI-OPEN2](#).**

### Target Group

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Programmers  
Configuring engineers

### Content

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Introduction to Visual Studio and the C# programming language  
Control structures (branches and loops)  
Introduction to the most important data types integrated in C#  
Using of methods  
Introduction to the structure of classes and the object-oriented programming concept of C#  
Introduction to the use of interfaces with Windows forms  
Introduction to TIA Portal Openness  
Tools for debugging programs  
Outsourcing of recurring tasks to methods

### Prerequisites

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SIMATIC knowledge in the context of TIA-PRO1 or TIA-SYSUP

### Note

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Course documentation: English  
Trainer: English

### Type

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Face-to-face training

### Duration

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3 days

### Language

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en