

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

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### Short Description

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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.

### Objectives

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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.

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.

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

### 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 one of the courses  
["Simatic TIA Portal programmering 1 för plc \(TIA-PRO1\)"](#) or ["Simatic TIA Portal uppdatering från Step 7 V5.4/V5.5 \(TIA-SYSUP\)"](#)

### 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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18,600 SEK