SIEMENS

TIA Portal Openness Programmering 1 og 2 (TIA-OPE1-2)

Short Description

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. 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.

Objectives

• Program with Visual Studio and the C# programming language
• Create small applications with TIA Openness
• Learn what you need to do to use TIA Openness
• Create a project
• Create and adapt an S7-1500 with central and distributed I/O
• Provide an HMI with a variety of screens
• Generate a PLC program
• After appropriate preparation, fill the devices with the generated data
• Get to know other useful functions and ideas of implementing functions

Target Group

Programmers
Project Engineers
Project Planner

Content

• 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
• Digitalization - Industry 4.0
• Introduction to Visual Studio (as a short recap)
• Introduction to TIA Portal Openness and the Auto-save tool
• Working with libraries and projects in the TIA portal
• Adapting hardware through TIA Portal Openness
• Generation of PLC programs from library elements
• Increased flexibility by extending the existing program
• Programming ideas

Prerequisites

SIMATIC knowledge in the context of TIA-PRO1 or TIA-SYSUP
Basic knowledge of programming in the C# programming language and Visual Studio

Note

Both the training material and the language will be English for this training. However, the instructor understands Norwegian perfectly, so it is fully possible to ask questions in Norwegian. Answers will be given so that You are satisfied.
Register in the calendar one week before the training starts.

Type

Face-to-face training

Duration

5 days

Language

no