SIEMENS

SIMATIC - Motion Control in TIA Portal (TIA-MC)

Short Description

In this course, you will learn to program the motion control functions integrated in the SIMATIC S7-1500 or S7-1200 controllers using TIA Portal. Core topics are the technology objects speed axis, positioning axis and synchronous axis with practical exercises on training devices (SIMATIC S7-1500 and SINAMICS).

Objectives

You will program the SIMATIC S7-1500 or S7-1200 controllers in the TIA Portal. You will be able to precisely control the motion of axes with the integrated motion control functions.
In this technology course, you will learn step by step the benefits and the use of these functions. After each learning step, you will deepen your knowledge with hands-on programming.
After attending the course you will understand the interaction of the technological functions. You will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis, and integrate them in your program.

Target Group

Programmers
Commissioning engineers, configuring engineers
Service personnel

Content

- Basics of motion control
- SpeedAxis technology object
- PositioningAxis technology object
- Homing and traversing movements
- Programming with PLCopen
- Error messages and diagnostics
- Communication and libraries
- Output cam and measuring input
- SynchronousAxis technology object
- Absolute and relative gearing
- Strategies for synchronization and desynchronization
- Cam disc creation using the graphical cam editor and during runtime
- Closed-loop control and optimization
- Interplay between Motion Control and Safety Integrated
- Cam disc creation using libraries
- Practical exercises on training devices with SIMATIC S7-1500T and SINAMICS drives

Prerequisites

Knowledge of programming in the TIA Portal (equivalent to knowledge after completion of the TIA-PRO1 or TIA-SERV2 course) and SINAMICS S120 knowledge

Type

Face-to-face training

Duration

5 days

Language

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Fee

1,115 EUR
(price without 20% VAT)