SIEMENS

SIMATIC S7- S7-1200 Advanced Course (TIA-MICRO2)

Type

Instructor-led Learning

Duration and Continuing Education Units (CEU)

4.5 Days
3 CEUs

Target Group

- Programmer
- Engineer

Short Description

This course is for SIMATIC S7-1200 PLC users who are involved with developing or sustaining automation systems, and their application programs. This course is for users needing advanced programming, configuration skills, and who may use the extended system functions.

The goal of this course is to help the student build skills utilizing in programming and extended system functionality of the S7-1200 system, STEP7 engineering tool, WinCC Basic, and Human Machine Interface (HMI). This course begins with a brief review of the SIMATIC S7-1200 system, its components, and the HMI Basic Panels. Discussions on the integrated engineering system SIMATIC STEP 7 Basic, controller, and WinCC Basic for the HMI are included in this course.

Objectives

- Identify the components and features of the S7-1200 system
- Navigate the STEP7 Portal software and identify the basic tool set
- Complete a system hardware configuration including basic PC - PLC communications
- Use the STEP7 tools to monitor and troubleshoot the system
- Build, document, test and troubleshoot a structured STEP7 Basic program using the multiple address types and data blocks
- Build a basic HMI project and integrate into the STEP7 program
- Use core application instructions, functions, and blocks to build and test a basic control program
- Efficiently used the diagnostics tools of STEP7
- Program using processed analog values, scale and tune using the STEP7 PID Loop and tracking tools
- Build a project using the high speed and pulse functions of STEP7
- Use the STEP7 technological functions for basics speed and position control
- Configure peer and device network communications

Content

- SIMATIC S7-1200 family overview
- Introduction to STEP7 Basic
- Device and Networks Portal
- Monitoring
- Programming with STEP 7 Basics
- HMI for Process Control

- Instruction catalog elements
- System diagnostics
- Analog value processing
- Pulse Functions
- Speed and Position Control
- Communications

Recommended Prerequisites

Introduction to TIA Portal and Diagnostics: US-PTBADIA

Language

English