

S7 Programming 2 (SCT-S7TIAP2B)

Global Reference

SIMATIC S7 Programming 2 (ST-PRO2)

Type

Face-to-Face Learning

Duration and Continuing Education Units (CEU)

32.5 Hours over 4.5 Days
3.2 CEUs

Target Group

- Programmer
- Engineer

Short Description

This course is for SIMATIC S7-300/400 PLC users with basic engineering experience in the design and sustaining of SIMATIC automation systems and their application programs.

This course is the second in a three part series which increases skills with Siemens STEP7 Totally Integrated Automation. Students will learn to leverage the power of Simatic software with advanced structured programming techniques. A systems approach to the integration of efficiently programming the S7300/400 PLCs, plus connectivity and functionality of an HMI and Micro Master Drive are the central focus of this course. Emphasis on Statement List (STL) programming for both direct and indirect addressing is an integral part of the course. The core issues of efficient use of CPU resources, establishing communications, passing information, and managing integrated diagnostics are included. Skills in error management and extended diagnostics are reinforced throughout this agenda. This course includes classroom instruction, demonstration and considerable hands-on lab work.

Objectives

- Leverage the power of Block and Function libraries
- Use STL for advanced program development
- Employ indirect addressing in a program
- Incorporate System Functions (SFC) in a program
- Integrate an HMI and Drive system with the PLC
- Use Instance and Multi-Instance data Blocks
- Use interrupt-driven and error processing program execution blocks
- Leverage STEP7 advanced diagnostics

Content

- Programming review
- Data Blocks and complex variables
- HMI event and alarm messages
- Introduction to interrupts and error organization blocks
- Program control

- Organization Blocks
- Parameter Passing with FC, FB, SFB, SFC
- Indirect Addressing
- Tag Table assignments
- S7-PCT Interface
- Troubleshooting the automation system

Mandatory Prerequisites

[S7 Programming 1: SCT-S7TIAP1C](#)

OR

[S7 Programming 1 - Virtual: SCT-S7OILTIAP1C](#)

OR

[S7 Automation Maintenance 2: SCT-S7300S2C](#)

Language

English

Course descriptions are Siemens Intellectual Property and copyright protected. Do not modify without written permission from SITRAIN US. ©2023 Siemens Industry, Inc.