

## SIMATIC System Retraining Course for SIMATIC S7-1500 in TIA Portal (TIA-SYSUP)

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### Type

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Instructor-led Learning

### Duration and Continuing Education Units (CEU)

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4.5 Days  
3 CEUs

### Target Group

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- Engineer
- Maintenance

### Short Description

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This course “bridges” STEP 7 Version 5.x knowledge over to SIMATIC S7 TIA PORTAL. The fast-paced curriculum is designed for experienced Version 5.X users who are, or will be, involved with developing or sustaining TIA PORTAL projects. The course is designed for both Engineering and Maintenance personnel with current working knowledge using Ver. 5.x STEP 7 environment, programming tools, and troubleshooting techniques.

### Objectives

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- Configure the components and feature functions of the S7-1500 system.
- Navigate the STEP7 Portal software and utilize the basic and advanced tool set.
- Configure system hardware including basic networking communications, HMI, & Drive.
- 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 employ the diagnostics tools of STEP7
- Utilize Start Drive to Integrate and Commission a drive.
- Setup and Configure Devices and Networks.
- Utilize the SCL Editor to program and test blocks.

### Content

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- The SIMATIC S7 System Family
- Introduction to TIA Portal
- Training Devices
- Migration of STEP 7 Projects
- Devices and Networks
- Introduction to PROFINET IO and PROFIBUS DP
- PLC Tags
- S7 Blocks and S7 Editor
- Introduction to HMI
- Advanced Programming

- Troubleshooting

## **Mandatory Prerequisites**

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

OR

[S7 System Tools and Troubleshooting 2: US-S7300S2C](#)

## **Note**

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The course begins with an overview of the latest SIMATIC S7-1200 and S7-1500 systems. It is followed by in-depth discussions and hands-on exercises covering Engineering Software Framework, Network configuration, Distributed I/O, PLC Tagging, and Troubleshooting. The course covers using the Portal and Project tools to efficiently build a STEP7 system project. During this course, software diagnostic tools are used for debugging. Program creation involves using various instruction sets, memory areas, program blocks, SCL, and library functionality.

This is a live, virtual instructor led course delivered in 3- hour learning modules through an innovative web application. Access to STEP 7 software will be provided through a cloud-based application. Learners are encouraged to complete assigned lab exercises during and after session to reinforce the learning modules throughout the week. Professional Siemens instructors are available to answer questions outside of scheduled class times.

## **Language**

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English

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