

Course Details

SIEMENS SIMATIC S7-300 Service Level 1 ST-SERV1 (5 days)

HRDF CLAIMABLE

*Subject to Approval

Requirements

This course is designed for industry "first responders" to operations controlled with Siemens STEP 7 automated control systems. Participants not requiring programming skills, such as maintenance technicians, electricians, supervisors and others, who need an understanding of their Siemens control system to maximize line uptime, should attend this course. This course also makes a great platform for those new to automation systems and industrial electronics. **PLEASE NOTE: If PLC programming as a job skill is required, one may consider the SIEMENS Simatic Programming L1 (ST-PRO1) instead.**

Objectives

This course provides Participants with a solid base of STEP 7 PLC tools and skills necessary for successful system diagnostics and repair. This course is ideal for environments with high uptime requirements and stable control system programs. Fully functional application programs are used as a baseline for the participant to understand key process flow information, diagnostics tools and repair techniques. Build skills and reduce downtime with this focused automation system troubleshooting course.

Topics

Upon completion of this course, the participant shall be able to:

- Identify and maintain the components of a typical automation system.
- Understand the basic steps in hardware assembly, cabling, wiring and testing.
- Establish communications with the PLC with multiple technologies.
- Retrieve, Archive, and Download programs.
- Use the hardware configuration editor to inspect and troubleshoot hardware problems.
- Use SIMATIC Manager tools for basic program administration tasks.
- Establish connections to an HMI & Drive system.
- Follow program power/logic flow and interpret/modify basic program elements.

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Course Certificate

SIEMENS Certificate will be awarded after the training.

Contact Information

SIEMENS MALAYSIA SDN. BHD. (93008-X)

GST Reg No. 000956203008

Digital Factory/ Process Industries & Drives
Level 1, Reception, CP Tower, No. 11, Jalan 16/11,
Pusat Dagang Seksyen 16, 46350 Petaling Jaya, Selangor.

Helpdesk: 1800 808 8888

Fax: +60-3-7955 3720

E-mail: industry.my@siemens.com

e-Pass: [siemens.asia/e-pass_v2/ASEAN](https://www.siemens.com/asia/e-pass_v2/ASEAN)

Website: www.siemens.com.my/sitrain

Bank Details

Bank Name: Deutsche Bank (M) Sdn Bhd

Bank Account Number : 0020768000

Bank Address : 18th – 20th Floor, Menara IMC 8,
Jalan Sultan Ismail,
50250, Kuala Lumpur

Bank Swift Code : DEUTMYKLXXX

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Daywise Schedule

Day 1

1. SIMATIC S7 System Family overview
 - Totally Integrated Automation
 - S7-200 / 300 / 400 Components
 - Programming and Commn. Devices
 - STEP7 Overview
2. Training Units and Addressing
 - Training System Variants
 - Conveyor Model
 - Symbols
3. Installation/Maintenance of PLC
 - Configuring S7 components
 - Installation rules
 - Electrical Configuration
 - Wiring of S7 modules

Day 2

4. SIMATIC Manager
 - Project Structures
 - Creating a Project
 - SIMATIC Manager tools
 - CPU memory reset
 - Retrieving a project
 - Memory Card operations
5. Symbols
 - Symbolic Addressing
 - Editor Tools
 - Importing & Exporting
6. Hardware Configuration
 - CPU Properties and Parameterization
 - Hardware Configuration methods
 - Remote I/O Connections
 - CPU Clock Memory

Day 3

7. Hardware Commissioning
 - Check list
 - Module indicators
 - Variable table
 - I/O wiring testing

8. Block Architecture and Block Editor
 - Program Structures & Execution
 - Program Blocks
 - LAD / STL / FBD Editors
9. Binary Operations
 - AND, OR, XOR
 - NO/NC Contacts

Day 4

10. Digital Operations
 - Data Types - Integer, Real, BCD
 - Timers & Counters
 - Accumulators
 - Data Management & Conversions
11. Introduction to HMI
 - Downloading projects
 - Establishing communications
 - Editing tags
 - Control & monitoring
12. Rewiring a user program
 - Leading Symbols
 - Block Consistency
 - Comparing blocks

Day 5

13. Documentation
 - Tools
 - Program Management
 - Memory Cards
 - Project archiving and retrieval
14. Exercise
 - Memory Reset
 - Debug simple program errors
 - Software and Hardware Commissioning

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Day	Time	Topics
Day – 1	09:00 Hrs – 09:20 Hrs 09:20 Hrs – 10:00 Hrs 10:15 Hrs – 12:00 Hrs 13:00 Hrs – 15:00 Hrs 15:15 Hrs – 17:00 Hrs	SIMATIC S7 System Family overview Training Units and Addressing Practical on the above Installation/Maintenance of PLC Practical on the above
Day – 2	09:00 Hrs – 10:00 Hrs 10:15 Hrs – 12:00 Hrs 13:00 Hrs – 15:00 Hrs 15:15 Hrs – 17:00 Hrs	SIMATIC Manager Symbols Hardware Configuration Practical on the above
Day – 3	09:00 Hrs – 10:00 Hrs 10:15 Hrs – 12:00 Hrs 13:00 Hrs – 15:00 Hrs 15:15 Hrs – 17:00 Hrs	Hardware Commissioning Block Architecture and Block Editor Binary Operations Practical on the above
Day – 4	09:00 Hrs – 10:00 Hrs 10:15 Hrs – 12:00 Hrs 13:00 Hrs – 15:00 Hrs 15:15 Hrs – 17:00 Hrs	Digital Operations Introduction to HMI Rewiring a user program Practical on the above
Day – 5	09:00 Hrs – 12:00 Hrs 13:00 Hrs – 15:00 Hrs 15:15 Hrs – 16:00 Hrs	Documentation Practical on the above Feedback & Valedictory session

Break Timings:

10:00 Hrs – 10:15 Hrs	Morning Tea Break
12:00 Hrs – 13:00 Hrs	Lunch Break
15:00 Hrs – 15:15 Hrs	Afternoon Tea Break
17:00 Hrs – 17:15 Hrs	Recess & End of Day