

Course Details

SIEMENS SIMATIC S7-300 Programming Level 2 ST-PRO2 (5 days)

HRDF CLAIMABLE

*Subject to Approval

Requirements

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. **PLEASE NOTE:** Attending ST-PRO1 OR SERV1 course is a prerequisite for this course.

Objectives

This course is the last in a two part series which builds skills with Siemens STEP7 engineering software. Advanced programming tools, techniques, functions, data management and diagnostics are the focus of this course. This course takes a systems approach addressing the S7300 / 400 PLCs, plus basic connectivity and functionality of an HMI and Drive system on a PROFIBUS network.

This programming course is designed to help the participant understand the techniques and benefits of structured programming. Participants will also learn to leverage the efficiencies and power of Siemens program editors (LAD, STL, FBD), block and function libraries. Managing and manipulating data is a key focus in this course.

Topics

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

- Understand the concepts of structured program creation.
- Leverage the power of Block and Function libraries.
- Use STL for advanced program development.
- 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.

Course Details

SIEMENS SIMATIC S7-300 Programming Level 2 ST-PRO2 (5 days)

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

Course Details

SIEMENS SIMATIC S7-300 Programming Level 2 ST-PRO2 (5 days)

Daywise Schedule

Day 1

1. Training Units and Addressing
 - Simulator variants
 - I/O Addressing
 - Symbols
2. Hardware and Software Commissioning
 - Hardware Configuration
 - Uploading & Down loading
 - Checking hardware connections
 - Profibus review
3. Methods for Program Design
 - Block structure
 - PLC Data types
 - S7 instruction set
 - Program testing

Day 2

4. Analog Value Processing
 - Analog module addressing
 - Analog signal conversion
 - Resolutions and ranges
 - Scaling values
5. Jump and Accumulator Functions
 - Jump instructions
 - Jump Distributors
 - Accumulator instructions
 - Arithmetic operations
6. Functions and Function Blocks
 - Parameter assignable blocks
 - Function Blocks (FB)
 - Block calls
 - Multi instance

Day 3

7. Indirect Addressing
 - Addressing possibilities
 - Memory indirect addressing
 - Using pointers
8. Using System Blocks
 - CPU specific system blocks
 - Library functions
 - SFCs & SFBs

Day 4

9. Data Exchange with MM 420
 - Restoring factory default
 - Basic Commissioning
 - Control from PLC
10. Organization Blocks
 - OB review
 - Synchronous errors
 - Asynchronous errors
 - PROFIBUS diagnostics

Day 5

11. Analyzing Diagnostic Data
 - Diagnostics function review
 - Writing user messages
 - Diagnostics buffer
12. Tags and Alarm in HMI
 - Message system basics
 - Event and alarm pointers
 - Creating tags

Course Details

SIEMENS SIMATIC S7-300 Programming Level 2 ST-PRO2 (5 days)

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	Training Units and addressing Hardware & Software Commissioning Practical on the above Methods for program design 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	Analog value processing Jump and Accumulators Functions Practical on the above Functions & Function Blocks
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	Indirect Addressing Practical on the above System Blocks 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	Data Exchange with MM4 Organization Blocks Blocks Practical on the above
Day – 5	09:00 Hrs – 12:00 Hrs 13:00 Hrs – 15:00 Hrs 15:15 Hrs – 16:00 Hrs	Analyzing Diagnostic Data Tags and Alarm in HMI 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