

Course Details

SIEMENS SIMATIC TIA PORTAL S7-1200 Advance (TIA-MICRO2 – 3 days)

HRDF CLAIMABLE

*Subject to Approval

Requirements

This course is for SIMATIC S7-1200 PLC users who are involved with developing or maintaining automation systems and their application programs. Basic knowledge of automation technology and attended SIMATIC S7-1200 knowledge corresponding to TIA-MICRO1.

Objectives

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 Basic and SIMATIC WinCC Basic.

The second part of the SIMATIC S7-1200 training is based on the knowledge of the TIA Portal gained in the SIMATIC S7-1200 basic course, including SIMATIC STEP 7 Basic and HMI. You will expand your knowledge of programming in SCL, connecting drives, use of the TIA Portal diagnostic tools for clearing hardware faults and software errors, and PROFINET IO. You will also learn about the technology functions of the PID controller and drive functions that are offered by the SIMATIC S7-1200. You will thus be able to adapt your plant to new demands.

Topics

After attending the course, you can do the following:

- Set up SIMATIC S7-1200 PROFINET IO networks
- Understand the interaction of TIA components
- Perform specific commissioning of TIA components
- Use the PID controller technology functions and drive functions of the SIMATIC S7-1200
- Systematically diagnose and correct hardware and software errors in the SIMATIC S7-1200 automation system with the diagnostic tools of the TIA Portal engineering portal
- Create simple programs in the programming languages LAD, FBD, and SCL

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Course Certificate

Certificate of participation will be awarded after the training.

Contact Information

SIEMENS MALAYSIA SDN. BHD. (93008-X)

GST Reg No. 000956203008

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Website: www.siemens.com.my/sitrain

SIEMENS

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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. Training Unit

- Training units and addressing
- Configuration a station with S7-1200
- Modules of the S7-1200 training unit

2. Commissioning Hardware & Software

- Types of Program Blocks
- Data Block, Function and Function Block
- Commissioning & Programming

3. Analog Value Processing

- Parameterizing the Analog Module
- Hardware Diagnostics
- Downloading Blocks

Day 2

4. Data Blocks

- Creating and monitoring data blocks
- Addressing data block variables
- FBD/ LAD

5. Introduction to Industrial Communication

- CPU Communication
- Packet-oriented and data flow-oriented
- Communications

6. Introduction to PROFINET

- PROFINET IO
- Switched Ethernet
- Distributed I/O with PROFINET IO

7. Tags and Messages in HMI

- backing up and restoring an online HMI
- configure an I/O field
- create trigger or monitoring tags
- synchronization between CPU and HMI

Day 3

8. Technology Objects

- PWM and PTO
- Closed-loop control
- PID Controller

9. Troubleshooting

- Hardware diagnostics
- Modify Variables
- LAD/ FBD

10. SCL

- Application
- Block and expand

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Time-wise Schedule

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	System Overview Training Unit Commissioning Hardware Analog Value Processing Practical on the above
Day – 2	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	Data Blocks Introduction to Industrial Comm Introduction to Profinet Tags and Messages in HMI 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	Technology Objects Troubleshooting SCL 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