SIMATIC MANAGER S7 (S7-300 / S7-400)

TRAINING PROVIDER : MTA SKILLLAB SDN BHD

COURSE SUMMARY

A fast-track, hands-on introduction to programming SIMATIC S7 controllers using STEP 7 (Classic). Participants learn PLC scan/execution, project setup, hardware configuration, program structuring with OB/FC/FB/DB, basic logic (bit, timers, counters), data handling, commissioning, and diagnostics. Brief touchpoints cover HMI linkage, distributed I/O, and drive control concepts.

LEARNING OUTCOMES

By the end of the course, participants will be able to:

- Set up a STEP 7 project and configure CPU, racks, and I/O modules.
- Explain the PLC execution model (OB1 cycle, startup OBs) and structure code with OBs, FCs, FBs, and DBs.
- Develop, download, and test logic using contacts/coils, comparisons, math, timers (TON/TOF/TP), and counters (CTU/CTD).
- Use symbols and data blocks (global and instance) to manage data cleanly.
- Commission and troubleshoot using watch tables, forcing, diagnostics buffer, and online/offline compare.
- Describe integration points with basic HMI screens, distributed I/O (e.g., PROFIBUS/PROFINET concepts), and simple drive commands.

LEARNING CONTENT

- Foundations & core programming
- Commissioning, diagnostics, HMI & field integration

TRAINING DETAILS

Duration & Schedule
2 Days | 9:00 am – 5:00 pm (Meal Provided)

Location
Skilllab Training Center,Prai, Penang

Target Audience
Technicians, Maintenance & Junior Automation Engineers
(Max. 15 participants)

Prerequisites
Basic electrical/automation knowledge and Windows PC skills.

Delivery & Materials

- Method: Short lectures, demos, and hands-on labs (simulator or training rig).
- Materials provided: Slides, lab guides, sample projects, checklists.

Certification Completion provided

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COURSE OUTLINE

FOUNDATIONS & CORE PROGRAMMING

- Project setup & hardware configuration
- Program structuring in S7
- Basic operations: bit logic, timers, counters
- Data handling & reusable blocks
- Test tools & download workflow

COMMISSIONING, DIAGNOSTICS, HMI & FIELD INTEGRATION

- Commissioning & diagnostics deep-dive
- Networks & distributed I/O (concepts)
- HMI basics (concepts)
- Drives integration (concepts)
- Program quality & documentation

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