

Siemens Step 7 300-400 Level 1 & 2

Course Description

This training course provides you the handling of the Sematic Manager or TIA Portal as client required, configuration and parameterization of hardware. PLC hardware, programming with ladder, function block and STL, finally apply PID Control example, also deal with distributed IOs.

Target Audience

Programmers, commissioning engineers, service personal and configuring engineers.

Pre-requisites

- Basic computer skills with Windows 7 very helpful.
- Few classic control experience or knowledge.

Duration

- **Class room:** 7 days, 7 hours/day.
- **On line:** 16 days, 3 hours/day.

Course Outline

- Hardware configuration and parameterization of the S7-300 modules.
- Ladder diagram programming language (Bit Instructions – Timers – Counters).
- Function Block Diagram programming language (Bit Instructions – Timers – Counters),
- STEP7 block types and program structuring.
- Programming of blocks.
- Data Management with data blocks.
- Identify and using different organization blocks.
- Analog signal identifications,
- Analog module configurations,
- SFC Converting functions,
- Word logic instructions and Conversion instructions,
- PID Controller system,
- Statement List programming language,
- Remote IOs configurations through profinet and profibus,
- Program documentation and backup.
- Test tools for system information, troubleshooting, and diagnostics.

Course Agenda

Day 1	<ul style="list-style-type: none"> • Communication to Station S7 300/400. • Hardware Configuration. • STEP7 block types and program structuring. • Programming of blocks.
Day 2	<ul style="list-style-type: none"> • Bit Instructions with Ladder, Function block and STL. • Data Management with data blocks. • Identify and using different organization blocks. • Examples.
Day 3	<ul style="list-style-type: none"> • Timers counters applications with Ladder, Function block and STL. • Counters applications with Ladder, Function block and STL. • Examples
Day 4	<ul style="list-style-type: none"> • Deeper understanding of contents through practical exercises on the SIMATIC S7-300 system model, • Symbols. • Variable tables. • More instructions (Mov , Compare ,etc).
Day 5	<ul style="list-style-type: none"> • Types of analog signals • Wiring of analog module • User define data types, • Word logic instructions and Conversion instructions,
Day 6	<ul style="list-style-type: none"> • Building PID Control System, • Converting programming language to statement list (STL), • Identify STL, • Apply examples using STL.
Day 7	<ul style="list-style-type: none"> • Configuring remote IOs. • Program documentation and backup. • Test tools for system information, troubleshooting, and diagnostics. • Reference data filter.