

## Blended Learning - SIMATIC S7-1500 with TIA Portal (AS-OL1500B)

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### Objectives

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After this learning journey you will be able to ...

- operate the "TIA Portal" engineering platform safely
- understand the basics of the interaction of TIA components
- solve simple programming tasks with elementary STEP 7 instructions
- structure small SIMATIC S7 programs with the help of OBs, FCs and FBs
- apply standards and work with them
- solve simple mathematical programming tasks with STEP 7 instructions
- commission simple/small machines or expand them independently
- test programs and fix simple errors
- configure a distributed I/O via PROFINET

### Target Group

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- Maintenance engineers
- Service engineers
- Programmers
- Commissioning engineers

### Content

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The Learning journey of blended training SIMATIC S7-1500 course consists of:

- 8 live modules (instructor-led)
- 14 self-study modules (SITRAIN Access)

A learning membership to work through the self-learning modules (SITRAIN access content) is included for 1 year.

- System Overview
- Devices & Networks, Hardware Configuration
- Basics of PLC
- Data Types, Programming Editors (LAD, FBD, STL)
- Addressing concept, Memory areas in PLC
- PLC Tags
- Binary Operations (NO, NC, Set, Reset)
- Program Blocks, OBs (Properties, Protection)
- Functions & Function Blocks
- Data Blocks
- Instructions (Timer, Counter)
- Analog value processing
- Remote IO Device communication over Profinet
- TIA Selection Tool
- Diagnostics using Web Server in PLC
- Diagnostics using Trace
- Maintenance Topics (Cross referencing, Upload, Program info etc.)

HANDS ON:

- Application example-based exercises after each topic using virtual cloud lab
- Individual labs will be allotted to each participant.

### Prerequisites

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- Basic knowledge of digital electronics and automation technology is essential

### Note

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TECHNICAL REQUIREMENT(for instructor-led live sessions):

- A computer or laptop with Windows 7/10 OS and a stable internet connection. (We recommend a data transfer rate of 16 Mbit/s.)
- Microsoft Teams platform for technical presentations and demo. (We recommend using desktop app for best possible use of all functions).
- Google Chrome internet browser for assessing virtual lab solution for hands-on

### Type

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Online-Training

### Duration

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45 hours

**Language**

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**Fee**

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42,000 INR  
18% GST additional on Course fee