

## Online Training - Blended Training on SIMATIC S7 1500 with TIA Portal (BT-1500)

### Objectives

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

You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual learning environment on a TIA system model. This consists of a SIMATIC S7-1500 automation system.

### Target Group

- Maintenance engineers
- Service engineers
- Programmers
- Commissioning engineers

### Content

#### 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.

#### Topics:

- 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

- Basic knowledge of digital electronics and automation technology is essential

### Note

#### 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

Online-Training

**Duration**

---

45 hours

**Language**

---

en

**Fee**

---

35,000 INR