

## Online Training - SIMATIC S7-400 with SIMATIC Manager (Basic Course) (AS-OL-400B)

---

### Objectives

---

To make participants aware and familiar with:

- SIMATIC S7-400 automation system
- STEP7 Classic software (SIMATIC Manager)
- Basic programming concepts in STEP7
- Troubleshooting of S7-400 system

### Target Group

---

- Service engineers
- Programmers
- Commissioning engineers
- Maintenance engineers

### Content

---

#### Hardware topics

- System overview of SIMATIC controller families
- SIMATIC S7-400 family in detail
- Hardware configuration of S7-400 controller in STEP7
- Module installation and wiring

#### SIMATIC Manager topics

- SIMATIC Manager i.e. STEP7 Classic software overview
- Licensing concept for STEP7

#### Software and Programming concepts

- Working with symbol table
- Bit logic instructions
- Concept of RLO
- Logic gates in various programming languages
- Programming rules
- Elementary data types
- Arithmetic and logic operations
- Working with VAT tables
- Analog value processing
- Linear v/s structured programming approach
- Effective programming using function and function blocks
- Use and need of data blocks
- Types of data blocks
- Concept of Organization blocks

#### Communication - Explanation and demo only

\* S7-400 controller with remote station on Profinet(PN)/Profibus DP protocol

#### Troubleshooting and diagnostic topics

- Significance of LED indication on different modules
- Diagnosis using diagnostic buffer
- Cross-references, call structure, assignment list, dependency structure
- Memory overlap identification
- Project backup
- Forcing, renaming, and rewiring concepts
- Project comparison

#### HANDS-ON

- Application example-based exercises after each topic.

#### Prerequisites

---

- Basic know how about automation technology is must
- Basic knowledge of electrical technology and digital electronics is essential

---

**Note**

- SOFTWARE VERSION: STEP7 v5.6 Professional SR2
- TECHNICAL REQUIREMENT:
- 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).
  - Goggle Chrome internet browser for assessing virtual lab solution for hands-on

---

**Type**

Online-Training

---

**Duration**

5 days

---

**Language**

en

---

**Fee**

32,500 INR  
18% GST additional on course fee