

## Corso di sistema TIA Portal 1 e Certificazione SITRAIN ICP BASIC (ICP-SYS1)

### Short Description

You will acquire the necessary skills to be able to carry out an initial diagnostic intervention on a machine in production with the distributed SIMATIC S7-1500 system. You will learn the basics to be able to operate on existing hardware configurations (PLC, SIMATIC ET 200SP, SIMATIC HMI, SINAMICS G) using the main diagnostic tools integrated in the TIA Portal and to be able to make simple changes to the existing PLC program. The course will also allow you to understand how to perform small implementations on SIMATIC HMI and perform a simple commissioning of a SINAMICS G series drive.

The fourth day of the course includes the exam to obtain the **SITRAIN Italian Certification Program BASIC** certification. During this day there is a refresh on the fundamental concepts of the course just followed and the execution of the exam, which includes an hour of theoretical part with closed questions and 2 hours of practical test.

### Objectives

After attending the course, you can:

- Back up and restore your TIA automation system
- Carry out commissioning of a SIMATIC S7-1500 PLC and the PROFINET network
- Implement simple changes to the user program
- Create a simple visualization and commission a SIMATIC HMI panel
- Parameterize a SINAMICS G120 drive and implement data exchange with a controller via standard telegram
- Use the most important diagnostic tools integrated in the TIA Portal

Upon successful completion of the evaluation exam:

- You will achieve the **SITRAIN Italian Certification Program BASIC** certification

### Target Group

Programmers  
Commissioning engineers  
Engineering personnel  
Maintenance personnel  
Service personnel  
Operators

### Content

- SIMATIC S7-1500 hardware overview
- SIMATIC STEP 7 development environment (TIA Portal)
- Backup and restore of a SIMATIC S7 PLC, a SIMATIC HMI operator control and monitoring system and a SINAMICS drive
- Use of the SIMATIC Automation Tool
- Migration from SIMATIC STEP 7 V5.x to TIA Portal
- SIMATIC S7-1500 commissioning: reset, firmware, status LED
- I/O distributed in PROFINET
- Commissioning of distributed peripherals via PRONETA
- PLC programming: Symbolic, OB, FC and FB program blocks, binary instructions, digital instructions (counters, timers)
- DB management
- SIMATIC HMI commissioning: download, firmware update, upload and download via PROSAVE
- Diagnostics via integrated tools: code monitoring, check and forcing table, cross references
- SINAMICS commissioning: parameterization and control panel via SINAMICS Startdrive, communication with standard telegram

The theoretical knowledge will be deepened with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7-1500 automation system, a SIMATIC ET 200SP distributed I/O, a SIMATIC WinCC Comfort operator control and monitoring system, a SINAMICS G120 drive and a conveyor model.

### Prerequisites

No requirements.

### Note

Certification Validity: two years from the date of the exam.

### Type

Face-to-face training

### Duration

4 days

### Language

it

