

## Corso base SIMATIC S7-1200 (TIA-MICRO1)

### Short Description

The Totally Integrated Automation Portal (TIA Portal) for SIMATIC S7-1200 forms the work environment for integrated engineering with SIMATIC STEP 7 Basic and SIMATIC WinCC. In this first part of the SIMATIC S7-1200 training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7-1200 automation system, configuration and parameterization of hardware, and the basics of programming. You will learn how to clear simple hardware faults and software errors in the SIMATIC S7-1200 automation system and to create, modify and expand small STEP 7 (TIA Portal) programs. You will thus be capable of reducing downtime. You will also get an overview on operator control and monitoring.

### Objectives

After attending the course, you can do the following:

- Understand the fundamentals of the interaction of the SIMATIC S7-1200 with an operator control and monitoring device
- Reliably operate the TIA Portal engineering platform
- Create, change, and expand small STEP 7 (TIA Portal) programs
- Configure, parameterize, and exchange SIMATIC S7-1200 modules
- Diagnose and fix simple hardware faults using the wiring test
- Diagnose and fix simple program errors using the status block
- Perform simple commissioning of the SIMATIC S7-1200

### Target Group

Programmers  
Commissioning engineers  
Engineering personnel  
Maintenance personnel  
Service personnel  
Operators

### Content

- Overview and significant performance characteristics of the SIMATIC S7-1200 system family
- The components of the TIA Portal: SIMATIC STEP 7 Basic and WinCC Basic
- Program execution in automation systems
- Binary and digital operations in the diagram ladder (LAD)
- Setup and assembly of the SIMATIC S7-1200 automation system
- Addressing and wiring the signal modules
- Hardware and software commissioning of the SIMATIC S7-1200 with the TIA Portal
- SIMATIC S7-1200 hardware configuration and parameterization
- Introduction to the Touchpanel
- Saving and documentation of the implemented program changes with the TIA Portal

Theoretical knowledge will be deepened with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7-1200 automation system, a SIMATIC WinCC Advanced operator control and a conveyor model.

### Prerequisites

SEP course or equivalent basic knowledge of automation systems.

### Note

This course is also available in Virtual Classroom mode: E-MICRO1.

At the end of the course you can deepen the topics covered through our **SIE-learning 4.0**: SIE-12TSCB, SIE-12CMS.

At the end of this course you can achieve, after an evaluation test, the **SITRAIN Italian Certification Program MICRO**.

### Type

Face-to-face training

### Duration

3 days

### Language

it