

Course Name: BASIC PLC & HMI

Short description

This course is a great fit for participants needing a solid introduction to the TIA Portal Development Environment and SIMATIC Manager. This course helps participants unlock the potential for increased productivity by building foundational concepts and showing how they apply to STEP 7 Professional (TIA Portal) & Siemens SIMATIC Manager programming software.

Objectives

- Throughout the course, participants will build STEP7 project from the beginning, learning proper program structure and documenting.
- A systematic approach to efficiently programming the S7-1500, S7-1200, S7-300 PLC is covered.
- The major difference between the TIA portal & SIMATIC manager.

Target Group

- Engineering students, Trainers, Planners/Implementers, Programmers & Operators.
- Service personnel, Commissioning engineers, Engineer personnel, Maintenance Personnel.

Content

- System Overview S7-1500, S7-1200 and S7-300 Function Comparisons.
- To be able to use and understand the operation of a number of extended PLC instructions in all programming languages depending on plant program usage.
- A compact introduction to simatic manager.
- Using SIMATIC Manager- Creating and managing an S7 Project, Setting the PG/PC Interface.
- Configuring the Hardware system, Module Addressing, Variable Tables and the Force Table.
- Basic Programming with SIMATIC manager.
- Introduction to the TIA Portal Development Environment-Portal View vs. Project View, Windows Arrangement, Data Types.
- Devices and Network- Creating, Parameterizing, Compiling and Downloading.
- PLC Tags-Global vs. Local Tags.
- Introduction to I/O and Addressing-Analog I/O, Discrete I/O, I/O Addressing Principles.
- Introduction to various block types.
- Binary Operations, Digital Operations, Analog operation.
- TIA Portal Automation Languages-Ladder Diagram (LAD) language.
- Troubleshooting and alarms with an HMI device (Touch panel).
- Graphic image creation for operator control and monitoring.
- Make graphic object dynamic through programming for real time monitoring with an HMI.
- Hands-on exercises.

Prerequisites

- Technical understanding, Basic knowledge on digital electronics and computer networking.
- A basic understanding of electrical components such as relay, switches and solenoids would also be very useful.
- The ability to use an MS Windows PC, keyboard and mouse.

Note

In this course you will work with SIMATIC S7-300, S7-1500, S7-1200 and software SIMATIC STEP 7 based on TIA portal & SIMATIC manager.

Type

Face-to-face training.

Duration

36 hrs.

Language

English.

Course Fee

5500/- + tax

