

SIMATIC S7 PLC Programming - Basic Level based on S7-300/400

Why Attend

- The main aim of this course is to provide the participants with basic knowledge about Siemens PLC Programming, to create or to modify Step 7 PLC programs and to find PLC program faults.

Course Methodology

- The course is hands on with great emphasis on the practical aspects of Programmable Logic Controller applications. The course is based around Siemens S7-300 / 400 range of PLCs using SIMATIC Manager.

Course Objectives

By the end of the course, participants will be able to:

- The course objectives are to provide the participants with the knowledge and skills to enable them to work with Siemens S7 (300 / 400 Series)

On completion of this course the participant will be able to:

- Identify the components and performance characteristics of the SIMATIC S7-300/400 PLC
- Install a PLC system, including the communication cabling and wiring of I/O.
- Use the various address types to edit, reload, structure and run a program. Document, test, and basically troubleshoot the control system and its program.
- Diagnose and repair simple hardware problems.
- Utilize binary operations, timers, counters, comparators, and arithmetic operations for program modifications.
- Integrate and troubleshoot an HMI and Drive system within the control system.
- Configure and troubleshoot Profibus DP nodes
- Write simple programs and diagnose errors using S7 software package on S7-300/400 PLC's

Target Audience

- Electrical and instrumentation technicians and engineers

Target Competencies

- Oil & Gas
- Food & Beverage
- Cement
- Chemical Industry
- Mining
- Fertilizers
- Pharmaceutical Factories.
- Water and Waste Water station
- Customers who already have in their plants S7-300 / 400

Introduction to the S7 family of controllers.

- CPU S7-300 / 400 Portfolio
- ET200 Families
- IO modules
- Function Modules

Installation and maintenance of a PLC

The SIMATIC Manager software package

Hardware configuration

Hardware commissioning

Block architecture and Program Editors

Symbols

Binary Operations

Digital Operations

Introduction to HMI and Profibus DP

Rewiring

Introduction to Drive Systems

Program documenting, saving and archiving

Basic Troubleshooting

Each of the above topic areas will be tested through practical exercises using simulator / system model.

Open Discussion...

