SIEMENS Tia Portal Training Course Syllabus

Training course description:

This process control training course is designed to cover all basis and advanced functions of any PLC. Students do not need to have any PLC programming experience. All basic functions necessary to create a complete PLC program using function block and ladder logic will be used.

Using the Siemens Tia Portal engineering software, the process control training course will cover such topics as general controls, digital and analog IO, ladder logic programming, alarm / notification handling, HMI, emulation, best practices and more.

The goal of this process control training course is to teach and show how to build all process control logic necessary to make a PLC do what is required in any industrial project. All process control designed logic will be simulated and tested using PLC emulator on instructor own computer.

Moreover, this process control training course will give you knowledge and experience in building HMI and /or SCADA systems.

The good prerequisite for this model predictive control training course is:

- PID100: PID Tuning Certification and Primary Process Control

Learning outcomes:

Students get a chance to learn how to:

- Define and configure any PLC system, and design any digital and / or continuous control logic.
- Specify and tune any PID controller and / or complex control logic without any bumps during activation sequence.
- Define and configure HMI and SCADA system, and design HMI / SCADA tags, graphics, trends and other dynamic complex logic and animations.

Audience:

Process control engineers, Advanced process control engineers, Instrument engineers and DCS / PLC technicians.

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Duration:

Classroom training course: 3 Days (8-10 hours per day)

Online / Remote training course: 3 Days (8-10 hours per day)

Training course program:

1ST DAY:

- Which PLC to use
- How to configure PLC
- Configure digital input / output modules and signals
- Configure analog input / output modules
- Calibrate analog signals
- Design various digital (Boolean) sequence and logic
- Design timers, counters and various math logic

2ND DAY:

- Choose appropriate PID controller
- Design desired PID controller
- Tune a PID controller
- Design a cascade PID controllers
- Tune a cascade PID controllers
- Configure PV and OP tracking for bumpless transfer
- Design process warnings, limits and alarms

3RD DAY:

- Configure HMI or SCADA system
- How to connect HMI / SCADA to PLC
- Design process and popup screens
- Configure process historian
- Configure process trends
- Logging and approvals
- Design dynamic blocks and animations
- Design recipe logic and scripts