MERCURY

PLC, Telemetry & SCADA Technologies Training

02 - 06 Sep 2024
Barcelona (Spain)

PLC, Telemetry & SCADA Technologies Training

Ref.: 15012_245498 **Date:** 02 - 06 Sep 2024 **Location:** Barcelona (Spain) **Fees:** 5500 **Euro**

Introduction:

This highly relevant, industrially based PLC, SCADA, telemetry, and technologies training course will update the skills and knowledge of Technicians and Engineers alike. It is 'hands-on' using industry-standard PLCs in a simulated environment. Through this approach, the delegate will progress from learning the fundamentals of PLC applications to writing, debugging, and finally designing their programs.

Radio and wire-based telemetry systems, essential for understanding modern communication methods deployed in the field, are also studied and explained. These are vital for comprehensively understanding their use with programmable controllers and any Instrumentation/Controller remote application.

This PLC, SCADA, telemetry, and technologies course also includes a study of modern SCADA technologies. Again, the delegate will acquire new and updated skills essential in any fast-moving industrial environment with a hands-on approach using a modern industrially compliant SCADA software package.

Telemetry and SCADA in Industrial Automation:

Telemetry technology and SCADA Supervisory Control and Data Acquisition are integral to modern industrial automation. Understanding what telemetry is in technology and how telemetry SCADA systems function can significantly enhance the capabilities of engineers and technicians in managing complex control systems.

This PLC, SCADA, telemetry, and technologies course will delve into the specifics of SCADA telemetry solutions and explore how they can be used to monitor, control, and optimize industrial processes.

Targeted Groups:

- Electrical Engineers and Technicians.
- Control Engineers and Technicians.
- Communication Engineers and Technicians.
- IT and Software Engineers and Technicians.
- Design Engineers.
- Instrumentation Engineers and Technicians.
- Electricians.
- Instrument and Process Control Engineers and Technicians.
- Mechanical Engineers and Technicians.
- Operations Engineers.
- Process Engineers and Technicians.
- Production Professionals.
- Project Design Professionals.
- System Integrators.
- Other Professionals Managers, Engineers, Technicians involved in the Control and Process Industries require a fuller understanding of that industry.

Course Objectives:

At the end of this PLC, SCADA, telemetry, and technologies course, participants will be able to:

- Understand the operation, architecture, and use of an industry-standard PLC for Control purposes.
- Investigate the operation of the PLC through designing, building, and testing typical programs in the ladder programming language using industry-standard PLCs in a simulated environment.
- Become familiar and confident with the PLC, Telemetry, and SCADA environments.
- Understand the concepts of Radio Telemetry and acquire knowledge about the applications, limitations, and uses of frequency bands.
- Gain an understanding and knowledge of common wire-based communication protocols.
- Become familiar and knowledgeable with an industry-compliant SCADA software package.

Targeted Competencies:

At the end of this PLC, SCADA, telemetry, and technologies training, participants will be able to:

- Learn about a study and explanation of the PLC for control purposes.
- Understand through a 'hands-on' approach using industry-standard PLCs in a simulated environment of PLC programming - design and debugging.
- Investigation of Radio telemetry methods, frequencies used, and application and limitation of each frequency band.
- Study of commonly used wire-based telemetry methods and protocols such as RS232 and RS485.
- Investigate SCADA, its structure, and its application.
- Understand a typical SCADA application using an industry-compliant SCADA software package through a hands-on approach.

Course Content:

Unit 1: Introduction to Control Strategies:

- Continuous Control Systems.
- Sequential Control Systems.
- Relay Based Systems.
- Introduction to PLC Systems.
- PLC VS Relay Systems.
- Programming Formats.
- Logical Continuity.
- Software Familiarisation.
- Introduction to Industry Standard PLC Programming Software.

Unit 2: PLC Architecture:

- System Architecture.
- Memory and I/O Types.
- Scanning Algorithms.
- Program Scan Cycle.

Unit 3: Radio Telemetry Systems:

- Introduction.
- Elements of a Radio Link.
- The Radio Spectrum.
- Frequency Ranges.
- System Design Considerations.

Unit 4: PLC Programme Development:

- Analysis of PLC Programs.
- Design Methodology and Development of PLC Programs.
- Timer Method of Program Development.

Unit 5: Serial Data Communications:

- Communication Methods Simplex, Half-Duplex, Full-Duplex.
- RS232 Standard.
- RS422 Standard.
- RS485 Standard.

Unit 6: Analog I/O and Processing:

- Analog Inputs and Outputs.
- A/D and D/A Conversion.
- Programming Analogue Modules and Advanced Instructions.

Unit 7: Introduction to SCADA:

- System Architecture.
- Configuration and Operation.
- Introduction to Industry Standard SCADA Software.
- Design and Development of a new SCADA Project.
- Local Area Networks LANs.

Registration form on the :
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Complete & Mail or fax to Mercury Training Center at the address given below

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Official E-Mail:
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Person Responsible for Training and Development

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