PLCs [Programmable Logic Controllers]: Automation Systems

Participants learn how the PLC is integrated with operator interfaces (OIs), human machine interfaces (HMIs), and network I/O systems.

More than 60% of class time is hands-on programming, uploading and downloading exercises to and from the PLC. The program thoroughly examines PLC architecture, including input and output systems, ladder logic vs. relay logic, relay instructions, the role of timer delays, number systems, and the sizing and selection of PLCs. Troubleshooting elements cover installation precautions, wiring requirements, debugging and diagnostic tools.

WHAT THIS COURSE COVERS

- Modern Systems Overview
- Hardware Components
- Ladder Logic Review
- Human Machine (Operator) Interfaces (HMIS) Overview
- Human Machine (Operator) Interfaces (HMIS) Exercises
- Motion Control
- I/O BUS Network Overview

COURSE OUTCOMES

- Recognize Return on Investment HMIs can Provide as a Troubleshooting Tool.
- Experience the Ease of Developing HMI Projects and Configure, Scale and Monitor Analog Signals and Construct PLC/HMI Tag Data.
- Troubleshoot PLC/HMI Communication Problems and Review Ladder Logic Fundamentals.

WHO SHOULD TAKE THIS

- IT Technicians
- Instrumentation Technicians
- Maintenance Technicians
- Automation Technicians
- Multi-craft personnel
- Anyone who Needs Cross-Training on PLCs

COURSE AGENDA

- Modern Systems Overview
- Hardware Component
- Ladder Logic Review
- Human Machine (Operator) Interfaces (HMIS) Overview
- Motion Control
- PID and Analog Control
- I/O Bus Networks Overview
- Networking/Communication Exercises
- Diagnosing Networks

☐ Lecture ☑ Hands-on • ONSITE: 2-days (16 hours) • LIVE ONLINE: N/A