GLOBAL
Business
Minds

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Detailed Professional Training on SIEMENS Industrial Programmable Controllers

TRAIN

Introduction
Siemens Industrial Programmable Controllers (PLCs) are widely used in industrial automation applications, providing control and monitoring capabilities for a diverse range of processes and equipment
This comprehensive 5-day training program, delivered by Global Business Minds, will equip participants with advanced knowledge and practical skills in programming, configuring, and troubleshooting Siemens PLCs, specifically focusing on the S7-1200 series

Day 1: Introduction to SIEMENS PLCs
• Overview of Siemens PLCs and their applications in industrial automation
• Understanding the S7-1200 PLC architecture, hardware components, and programming languages
• Familiarization with the TIA Portal software environment for Siemens PLC programming
• Hands-on exercises in basic ladder logic programming and PLC operation
Day 2: Advanced Ladder Logic Programming
• Deepening understanding of ladder logic programming concepts and techniques
• Mastering advanced ladder logic instructions and functions
• Applying ladder logic to control complex industrial processes
• Hands-on exercises in programming real-world industrial scenarios using ladder logic
Day 3: Structured Text and Function Block Programming
• Introduction to Structured Text (ST) and Function Block (FB) programming languages
• Understanding the advantages and applications of ST and FB programming
• Mastering ST programming syntax, data types, and operators
• Creating and utilizing FBs to modularize PLC programs
• Hands-on exercises in programming industrial applications using ST and FBs
Day 4: PLC Communication and Networking
• Exploring communication protocols commonly used in PLCs, including PROFIBUS, PROFINET, and Modbus
• Understanding the principles of PLC networking and data exchange
• Configuring PLCs for communication with various devices and systems
• Hands-on exercises in establishing communication between PLCs and other automation components
Day 5: PLC Troubleshooting and Optimization
• Familiarization with common PLC troubleshooting techniques and tools
• Diagnosing and resolving hardware and software faults in PLC systems
• Optimizing PLC programs for performance and efficiency
• Hands-on exercises in troubleshooting and optimizing real-world PLC applications
Target Audience
This training program is designed for engineers, technicians, and professionals who have a basic understanding of Siemens PLCs and ladder logic programming and seek to advance their skills in programming, configuring, and troubleshooting Siemens PLCs
It is particularly beneficial for those working in industrial automation, process control, and manufacturing environments

Learning Outcomes
Upon completion of this training program, participants will be able to:
• Demonstrate advanced knowledge of Siemens S7-1200 PLC hardware, software, and programming languages
• Program complex industrial processes using ladder logic, Structured Text, and Function Blocks
• Configure PLC communication and networking for data exchange and remote control

• Effectively troubleshoot and optimize Siemens PLC systems for reliable operation

Certificate Delivered by Global Business Minds:

• Certificate of Completion in SIEMENS Industrial Programmable Controllers