MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

INDUSTRIAL AUTOMATION WITH PLCS & SCADA SYSTEMS

"Master Industrial Automation for Efficient and Smart Operations"

Schedule

Date	Venue	Fees (Face-to-Face)
12 – 16 Jul 2026	Riyadh, KSA	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Industrial automation is transforming modern manufacturing and process industries by increasing efficiency, reducing human error, and enabling real-time monitoring. This 5-day training provides in-depth knowledge and hands-on experience with Programmable Logic Controllers (PLCs) and Supervisory Control and Data Acquisition (SCADA) systems. Participants will gain the skills needed to design, implement, and troubleshoot automated industrial processes, enhancing productivity and operational reliability.

The course combines theory with practical exercises, case studies, and system simulations to provide a comprehensive understanding of automation principles. Attendees will learn how to program PLCs, integrate SCADA systems, and optimize industrial processes, preparing them to apply automation solutions effectively in diverse industrial environments.

Objectives

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

- Understand the fundamentals of industrial automation and control systems
- Program and configure PLCs for various industrial applications
- Design, implement, and monitor SCADA systems
- Integrate PLCs and SCADA for seamless industrial process control
- Troubleshoot automation systems and diagnose faults efficiently
- Apply best practices in industrial automation to improve productivity and safety

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Why Attend

- Gain hands-on experience with PLC programming and SCADA system integration
- Understand modern industrial automation concepts and trends
- Learn to design reliable and efficient control systems
- Enhance problem-solving skills in process control and automation
- Improve operational efficiency and reduce downtime in industrial settings
- Network with industry professionals and share practical insights

Target Audience

This program is designed for:

- Electrical, electronics, and instrumentation engineers
- Automation and process control engineers
- Maintenance and operations professionals in industrial environments
- Technicians responsible for PLC and SCADA systems
- Professionals seeking hands-on experience in industrial automation

Individual Benefits

Key competencies that will be developed include:

- Proficiency in PLC programming and configuration
- Ability to design and implement SCADA systems
- Skills in integrating PLCs and SCADA for process control
- Troubleshooting and diagnostic capabilities for automation systems
- Understanding of industrial control strategies and best practices
- Enhanced technical expertise in industrial automation for career growth

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved automation system reliability and efficiency
- Reduced downtime and maintenance costs
- Enhanced monitoring and control of industrial processes
- Better decision-making using real-time data from SCADA systems
- Optimized production processes and resource utilization
- Stronger technical expertise within the organization’s engineering team

Instructional Methodology

The course follows a blended learning approach combining theory with practical exercises:

- Strategy Briefings – Deep dive into PLCs, SCADA systems, and automation principles
- Case Studies – Real-world examples of successful industrial automation implementation
- Workshops – Hands-on exercises in PLC programming and SCADA configuration
- Peer Exchange – Group discussions on challenges and lessons learned in automation projects
- Tools – Templates, simulation software, and practical exercises for PLC and SCADA systems

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Course Outline

Detailed 5-Day Course Outline

Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Industrial Automation and PLCs

Module 1: Fundamentals of Industrial Automation (07:30 – 09:30)

- Overview of automation systems and industrial control
- Benefits and applications in modern industries

Module 2: Introduction to PLCs (09:45 – 11:15)

- PLC architecture, components, and types
- Basic programming concepts and ladder logic

Module 3: PLC Programming Basics (11:30 – 01:00)

- Hands-on exercises with simple control circuits
- Understanding timers, counters, and basic instructions

Module 4: Industrial Case Study (02:00 – 03:30)

- Practical examples of PLC-based automation in industries

Day 2: Advanced PLC Programming and Integration

Module 1: Advanced Programming Techniques (07:30 – 09:30)

- Structured programming, function blocks, and modular design

Module 2: Communication and Integration (09:45 – 11:15)

- PLC communication protocols and data exchange
- Integration with other industrial devices

Module 3: Practical Exercises (11:30 – 01:00)

- Programming complex sequences and fault handling

Module 4: Workshop: Process Automation (02:00 – 03:30)

- Simulation exercises for real-world industrial processes

Day 3: Introduction to SCADA Systems

Module 1: SCADA Overview (07:30 – 09:30)

- SCADA architecture, components, and functions
- Role in industrial monitoring and control

Module 2: Designing SCADA Systems (09:45 – 11:15)

- HMIs, alarms, trends, and data logging

Module 3: SCADA Configuration Exercises (11:30 – 01:00)

- Hands-on SCADA setup and visualization

Module 4: Case Study (02:00 – 03:30)

- SCADA application in real industrial environments

Day 4: PLC-SCADA Integration and Troubleshooting

Module 1: Integration Techniques (07:30 – 09:30)

- Linking PLCs with SCADA for seamless control

Module 2: Real-Time Monitoring and Control (09:45 – 11:15)

- Supervisory control and performance analysis

Module 3: Troubleshooting Techniques (11:30 – 01:00)

- Identifying and resolving system faults

Module 4: Workshop (02:00 – 03:30)

- Hands-on integration exercises

Day 5: Optimization, Best Practices, and Review
Module 1: Process Optimization (07:30 – 09:30)

- Enhancing efficiency and reducing downtime

Module 2: Best Practices in Industrial Automation (09:45 – 11:15)

- Safety, reliability, and maintenance strategies

Module 3: Capstone Project (11:30 – 01:00)

- Applying PLC and SCADA skills to a complete industrial process

Module 4: Review and Q&A (02:00 – 03:30)

- Summary of key learning points and next steps

Certification

Participants will receive a Certificate of Completion in Industrial Automation with PLCs & SCADA Systems, validating their expertise in industrial automation, PLC programming, SCADA configuration, and integration for practical applications in modern industries.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**