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/AUTOMATIC CONTROL SYSTEMS

"Driving Efficiency, Precision, and Reliability Through Smart Automation"

Schedule

Date	Venue	Fees (Face-to-Face)
28 – 30 Sep 2026	Doha, Qatar	USD 2495 per delegate

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

Introduction

Industrial automation and automatic control systems play a vital role in enhancing productivity, safety, and operational efficiency across modern industries. From manufacturing plants to utilities and process industries, automation enables precise control, reduced human error, and optimized resource utilization.

This intensive 3-day training provides participants with a solid understanding of industrial automation concepts, control system components, and practical implementation strategies. The course covers PLCs, sensors, actuators, control loops, and system integration, enabling professionals to design, operate, and maintain reliable automated systems aligned with industry best practices.

Objectives

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

- Understand fundamentals of industrial automation and control systems
- Identify key components of automated systems
- Explain principles of open-loop and closed-loop control
- Interpret control system drawings and logic diagrams
- Apply basic PLC and automation concepts
- Analyze and improve control system performance
- Enhance safety and reliability of automated operations

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Why Attend

- Gain practical knowledge of industrial automation fundamentals
- Understand how control systems improve efficiency and quality
- Learn best practices for automation system design and operation
- Reduce operational errors and downtime
- Improve troubleshooting and system optimization skills
- Enhance career prospects in automation and control engineering

Target Audience

This program is designed for:

- Electrical and instrumentation engineers
- Automation and control engineers
- Maintenance and reliability engineers
- Electrical technicians and supervisors
- Production, operations, and facilities engineers
- Professionals involved in automated and control systems

Individual Benefits

Key competencies that will be developed include:

- Strong understanding of automation and control fundamentals
- Ability to analyze control loops and system behavior
- Improved troubleshooting and diagnostic skills
- Enhanced understanding of PLCs and automation components
- Increased awareness of safety and system integration
- Professional development in automation engineering

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved operational efficiency and process stability
- Reduced downtime and production losses
- Enhanced reliability and maintainability of automation systems
- Improved safety and compliance with industry standards
- Better utilization of automation technologies
- Increased productivity and quality of operations

Instructional Methodology

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

- Technical Briefings – Automation concepts, control principles, and system architecture
- Case Studies – Real-world automation projects and lessons learned
- Workshops – Control loop analysis, logic design, and system troubleshooting
- Peer Exchange – Group discussions on automation challenges and solutions
- Tools – Control diagrams, PLC logic examples, and automation templates

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Course Outline

Detailed 3-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules Coffee Breaks: 09:30 & 11:15 Lunch Buffet: 01:00 – 02:00

Day 1: Fundamentals of Industrial Automation

Module 1: Introduction to Industrial Automation (07:30 – 09:30)

- Evolution and benefits of industrial automation
- Types of automation systems
- Applications across industries

Module 2: Control System Basics

- Open-loop vs. closed-loop control
- Feedback systems and stability
- Control system terminology

Module 3: Automation Components

- Sensors, transmitters, and actuators
- Drives, motors, and control panels
- System integration overview

Day 2: Control Systems and PLC Fundamentals

Module 1: Control Loop Analysis

- Process variables, setpoints, and controllers
- PID control concepts and tuning basics
- Common control loop issues

Module 2: PLC Fundamentals

- PLC hardware and architecture
- Basic PLC programming concepts
- Input/output modules and communication

Module 3: Human Machine Interface (HMI)

- HMI design principles
- Operator interaction and alarms
- Basic SCADA overview

Day 3: Automation System Integration and Maintenance

Module 1: Automation System Design & Integration

- Control system architecture
- Field devices and network communication
- Integration challenges and solutions

Module 2: Maintenance and Troubleshooting

- Common automation faults
- Diagnostic tools and techniques
- Preventive maintenance practices

Module 3: Safety, Reliability, and Optimization

- Functional safety basics
- Improving system reliability and performance
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Best practices and continuous improvement

Certification

Participants will receive a Certificate of Completion in Industrial Automation / Automatic Control Systems, validating their knowledge and practical understanding of automation principles, control systems, and industrial applications.

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**

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