

THE INTERNET OF THINGS (IOT) GENERAL COURSE

"Exploring the Power of IoT: From Concept to Practical Applications in Various Industries"

Schedule

Date	Venue	Fees (Face-to-Face)
17 - 21 Aug 2026	London - UK	USD 3495 per delegate

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

Introduction

The Internet of Things (IoT) is a rapidly evolving field, driving innovation across industries by connecting devices and enabling data exchange. This 5-day intensive course will introduce you to the world of IoT, covering its fundamentals, technologies, and real-world applications. The course will explore how IoT is shaping various industries, from smart homes and healthcare to industrial automation and logistics.

Throughout the course, participants will gain practical knowledge of IoT system architecture, connectivity options, data collection methods, and security considerations. You will also learn how to deploy IoT devices and manage data from IoT ecosystems to optimize operational efficiency, product quality, and customer experience.

Objectives

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

- Understand the fundamentals of IoT technologies and how they are applied across various industries
- Identify key IoT components such as sensors, actuators, connectivity protocols, and data processing systems
- Implement basic IoT systems and understand the lifecycle of IoT data
- Explore security considerations for IoT networks and devices
- Develop a roadmap for IoT adoption in different organizational settings
- Apply IoT solutions to improve operational efficiency and decision-making in various domains

Why Attend

- Gain a foundational understanding of IoT technologies and their diverse applications
- Learn how to design, deploy, and manage IoT systems in both industrial and consumer settings
- Understand the key components and architecture of an IoT ecosystem
- Learn best practices for IoT device security and data management
- Explore case studies demonstrating the impact of IoT in different industries
- Acquire the skills needed to identify opportunities for IoT implementation within your organization

Target Audience

This program is designed for:

- Professionals interested in understanding the potential and applications of IoT across industries
- Engineers, IT specialists, and technology managers looking to implement IoT solutions
- Data scientists and analysts who work with data generated by IoT systems
- Business professionals seeking to enhance decision-making through real-time data
- Anyone interested in learning how IoT is transforming industries like manufacturing, healthcare, logistics, and more

Individual Benefits

Key competencies that will be developed include:

- A solid understanding of IoT architecture, components, and their applications
- Practical skills in implementing and managing IoT systems
- Knowledge of security best practices for IoT devices and networks
- Ability to analyze data from IoT systems for better decision-making
- A deep understanding of the integration of IoT in various industrial and commercial sectors

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- The ability to assess and implement IoT solutions to improve operational efficiency
- Knowledge of best practices for integrating IoT into organizational processes
- Improved decision-making through data-driven insights from IoT devices
- Enhanced capacity to manage IoT systems securely and effectively
- A deeper understanding of how IoT can create value in different business environments

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Deep dive into IoT technologies, business applications, and system design
- Case Studies – Real-world examples of successful IoT adoption and implementation in various industries
- Workshops – Practical sessions on deploying IoT devices, connecting systems, and managing data
- Peer Exchange – Group discussions on IoT challenges, opportunities, and lessons learned from implementation
- Tools – IoT platforms, tools for data analysis, and security practices for IoT deployment

MAWA EVENTS

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Course Outline

Detailed 5-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: Introduction to IoT and Core Concepts

- Module 1: Understanding IoT and Its Key Components (07:30 – 09:30)
 - Definition of IoT and its significance in modern technology
 - Key IoT components: sensors, devices, connectivity, and data processing
 - Overview of IoT system architecture and ecosystem
- Module 2: IoT Applications Across Industries (09:45 – 11:15)
 - How IoT is transforming industries such as manufacturing, healthcare, agriculture, and logistics
 - Case studies of IoT implementation in different sectors
 - Identifying opportunities for IoT in your organization
- Module 3: IoT Devices and Connectivity (11:30 – 01:00)
 - Overview of IoT devices: sensors, actuators, and communication modules
 - Connectivity protocols used in IoT: Wi-Fi, Bluetooth, Zigbee, LPWAN, etc.
 - Selecting appropriate IoT devices and connectivity solutions for different applications

Day 2: Data Collection, Integration, and Analysis

- Module 4: Data Collection and IoT Networks (07:30 – 09:30)
 - Methods for collecting data from IoT devices
 - IoT network setup and configuration
 - Managing large volumes of real-time IoT data
- Module 5: IoT Data Integration and Processing (09:45 – 11:15)
 - Integrating IoT data with existing IT infrastructure
 - Data processing frameworks and platforms for IoT data
 - Best practices for handling IoT data at scale
- Module 6: Real-Time Data Analysis and Visualization (11:30 – 01:00)
 - Tools and techniques for analyzing real-time data from IoT devices
 - Using data analytics for decision-making and process optimization
 - Visualization tools for IoT data

Day 3: IoT Security and Privacy Considerations

- Module 7: IoT Security Basics (07:30 – 09:30)
 - Introduction to IoT security risks and challenges
 - Securing IoT devices, networks, and communication channels
 - Implementing authentication, encryption, and access control mechanisms
- Module 8: Data Privacy and Compliance in IoT (09:45 – 11:15)
 - Privacy considerations when dealing with IoT data
 - Legal and regulatory compliance for IoT deployments
 - Best practices for ensuring data privacy and meeting compliance requirements
- Module 9: IoT Network Security and Threat Mitigation (11:30 – 01:00)
 - Identifying and mitigating potential threats to IoT networks
 - IoT security frameworks and tools for risk management
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Case study: Responding to IoT security breaches

Day 4: Advanced IoT Technologies and Applications

- Module 10: IoT and Smart Cities (07:30 – 09:30)
- The role of IoT in smart city development and management
- Key applications of IoT in urban planning, transportation, and energy management
- Case study: IoT applications in smart cities around the world
- Module 11: Industrial IoT (IIoT) and Automation (09:45 – 11:15)
- How IoT is transforming industrial sectors through automation
- Applications of IoT in manufacturing, supply chain, and asset management
- Industrial IoT architectures and integration with existing systems
- Module 12: Future of IoT: Trends and Innovations (11:30 – 01:00)
- Emerging trends in IoT technology: 5G, AI, edge computing
- The future potential of IoT and its evolving impact on industries
- Preparing for the future: Scaling IoT solutions for tomorrow's needs

Day 5: IoT Roadmap and Certification

- Module 13: Developing an IoT Adoption Roadmap (07:30 – 09:30)
- Steps for adopting and integrating IoT in your organization
- Identifying challenges and overcoming barriers to IoT adoption
- Building a roadmap for successful IoT implementation
- Module 14: Review and Q&A (09:45 – 11:15)
- Recap of key concepts from the course
- Final Q&A session to clarify doubts
- Module 15: Certification and Course Closure (11:30 – 01:00)
- Distribution of certificates of completion
- Closing remarks and networking opportunity

Certification

Participants will receive a Certificate of Completion in Internet of Things (IoT) Fundamentals, validating their expertise in IoT technologies, data management, and their applications across different industries.

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Interested in running this course for your team?

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