MAWA EVENTS

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

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FUNDAMENTALS OF INTERNET OF THINGS (IOT)

"Empowering Intelligent Connectivity for Smart Devices, Systems, and Solutions"

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

The Internet of Things (IoT) is reshaping how people, devices, and systems interact by enabling seamless connectivity, intelligent sensing, and data-driven decisions. From smart homes and cities to industrial automation and digital healthcare, IoT forms the foundation of modern digital transformation initiatives.

This 5-day intensive course provides a foundational yet practical understanding of the IoT ecosystem, technologies, architecture, and real-world applications. Participants will gain critical insights into how IoT enables smarter infrastructure, enhanced efficiency, and innovative business models, along with hands-on guidance in planning IoT systems.

Objectives

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

- Understand the key concepts and architecture of IoT systems
- Explore core technologies including sensors, microcontrollers, connectivity protocols, and cloud platforms
- Identify IoT applications across industries such as manufacturing, healthcare, transportation, and utilities
- Analyze and interpret IoT data for decision-making
- Address key security, privacy, and regulatory concerns in IoT deployment
- Develop an action plan for IoT implementation and strategy within their organization

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Why Attend

- Understand the full scope of IoT and how it transforms industries
- Learn how to build and scale IoT-enabled systems and services
- Access frameworks, tools, and templates to assess and implement IoT
- Identify new revenue opportunities and efficiencies enabled by IoT
- Gain foundational knowledge for advanced topics like Industrial IoT and Smart Systems

Target Audience

This program is designed for:

- IT professionals, system integrators, and solution architects
- Engineers and automation specialists
- Digital transformation leaders
- Project and operations managers
- Decision-makers exploring smart technologies
- Entrepreneurs and product developers

Individual Benefits

Key competencies that will be developed include:

- Understanding of end-to-end IoT architecture
- Familiarity with hardware, communication protocols, and IoT platforms
- Insight into big data, analytics, and edge/cloud integration
- Awareness of cybersecurity and data governance in IoT
- Enhanced readiness for digital innovation roles

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved ability to innovate with connected technologies
- Enhanced operational visibility and control through smart devices
- Efficient design and integration of IoT systems into business operations
- Better risk management through IoT security and compliance practices
- Competitive advantage through smarter infrastructure and automation

Instructional Methodology

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

- Strategy Briefings – In-depth exploration of IoT building blocks, ecosystems, and use cases
- Case Studies – Practical examples of successful IoT deployment across sectors
- Workshops – Hands-on exercises to design IoT architecture and select platforms
- Peer Exchange – Group dialogue on challenges, innovation, and scalability
- Tools – Frameworks and toolkits for IoT evaluation, planning, and integration

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Course Outline

DETAILED 5-DAY COURSE OUTLINE (CUSTOMIZABLE)

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: IoT Fundamentals and Evolution (07:30 – 09:30)
- What is IoT? Scope, components, and evolution
- Market drivers, trends, and business opportunities
- Module 2: IoT Architecture and Layers (09:45 – 11:15)
- Device layer, network layer, data layer, and application layer
- Interoperability and integration
- Module 3: Enabling Technologies (11:30 – 01:00)
- Sensors, RFID, embedded systems, and actuators
- Edge devices and gateways
- Module 4: Group Discussion – Exploring IoT in Your Industry (02:00 – 03:30)

Day 2: Communication Protocols, Platforms & Ecosystems

- Module 1: Connectivity Protocols (07:30 – 09:30)
- Wi-Fi, Bluetooth, Zigbee, LoRa, NB-IoT, 5G
- Selecting the right communication technology
- Module 2: IoT Platforms and Services (09:45 – 11:15)
- AWS IoT, Azure IoT, Google Cloud IoT, IBM Watson IoT
- Device management and data ingestion
- Module 3: Ecosystem Components & Vendor Solutions (11:30 – 01:00)
- Overview of tools and services providers
- Open-source vs commercial options
- Module 4: Workshop – Designing a Simple IoT System (02:00 – 03:30)

Day 3: IoT Applications and Sectoral Case Studies

- Module 1: Smart Manufacturing & Industrial IoT (07:30 – 09:30)
- Condition monitoring, predictive maintenance
- Asset tracking and production optimization
- Module 2: Smart Cities and Transportation (09:45 – 11:15)
- Intelligent traffic systems, smart parking
- Waste, water, and energy management
- Module 3: Healthcare, Retail, and Agriculture (11:30 – 01:00)
- Patient monitoring, supply chain, precision farming
- Module 4: Case Study Review – Analyzing Successful IoT Projects (02:00 – 03:30)

Day 4: IoT Data Management, Analytics & Security

- Module 1: IoT Data Collection and Storage (07:30 – 09:30)
- Data streams, real-time processing, storage options
- Edge vs cloud data handling
- Module 2: Data Analytics and Insights (09:45 – 11:15)
- Using AI/ML for pattern recognition and alerts
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Visualization dashboards

- Module 3: IoT Security & Privacy Concerns (11:30 – 01:00)
- Cyber threats, encryption, and authentication
- Regulatory compliance and ethical issues
- Module 4: Workshop – Building an IoT Security Plan (02:00 – 03:30)

Day 5: Implementation Strategy, Roadmap & Emerging Trends

- Module 1: Planning IoT Initiatives (07:30 – 09:30)
- Assessing feasibility and business value
- Aligning goals with digital transformation strategy
- Module 2: Implementation Roadmap & Deployment Models (09:45 – 11:15)
- Project planning, vendor selection, pilot testing
- Scaling and continuous improvement
- Module 3: Future of IoT & Emerging Technologies (11:30 – 01:00)
- AIoT, Digital Twins, 6G, and the metaverse
- Convergence with blockchain and robotics
- Module 4: Final Review, Knowledge Assessment & Feedback (02:00 – 03:30)

Certification

Participants will receive a Certificate of Completion in Internet of Things (IoT) Fundamentals, certifying their foundational knowledge and readiness to participate in or lead IoT initiatives in enterprise, industrial, or public-sector settings.

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**