

THE INTERNET OF THINGS (IOT) IN HEALTHCARE

“Transforming Patient Care, Operations, and Medical Innovation Through Connected Health Technologies”

Schedule

Date	Venue	Fees (Face-to-Face)
07 - 11 Sep 2026	London, UK	USD 3495 per delegate

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

Introduction

The healthcare industry is rapidly embracing the Internet of Things (IoT) to improve patient outcomes, optimize clinical workflows, and manage medical assets. From wearable health monitors and smart beds to connected imaging devices and real-time location systems, IoT technologies are revolutionizing care delivery and digital health services.

This 5-day intensive course equips healthcare professionals, IT leaders, and policy makers with the knowledge and tools to plan, deploy, and evaluate IoT solutions in clinical and healthcare environments. Through real-world case studies, hands-on workshops, and technology demonstrations, participants will explore the integration of IoT with electronic health records (EHR), remote monitoring, AI diagnostics, and hospital operations.

Objectives

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

- Understand the architecture and components of healthcare IoT ecosystems
- Identify use cases for IoT across clinical, administrative, and home-care settings
- Evaluate medical sensors, device interoperability, and data integration strategies
- Design secure, compliant, and patient-centric IoT implementations
- Analyze real-time health data to support predictive and personalized care

Why Attend

- To modernize healthcare delivery with smarter, connected technologies
- To enhance patient monitoring, diagnostics, and emergency response systems
- To reduce clinical errors, improve asset utilization, and automate hospital workflows
- To align with digital health trends, including telemedicine and remote care
- To ensure compliance with HIPAA, GDPR, and medical device cybersecurity standards

Target Audience

This program is designed for:

- Hospital administrators and IT professionals
- Healthcare innovation and digital transformation teams
- Biomedical and clinical engineers
- Medical device manufacturers and integrators
- Regulatory, privacy, and risk management officers in healthcare

Individual Benefits

Key competencies that will be developed include:

- Designing and deploying IoT solutions in healthcare settings
- Knowledge of patient monitoring systems, smart infrastructure, and wearable tech
- Understanding data privacy, cybersecurity, and compliance frameworks
- Interfacing IoT with health records, analytics, and AI applications
- Assessing cost-effectiveness and ROI of connected health initiatives

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Enhanced quality of care through proactive and personalized services
- Improved patient safety and infection control via real-time monitoring
- Increased efficiency in resource usage and facility operations
- Better compliance with healthcare data protection and interoperability standards
- Capacity to innovate and scale digital health transformation projects

Instructional Methodology

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

- Strategy Briefings - Healthcare IoT trends, system architectures, and use case design
- Case Studies - Successful applications in hospitals, home care, and public health
- Workshops - Medical device mapping, workflow redesign, and data interpretation
- Peer Exchange - Interactive sessions on cross-functional integration challenges
- Tools - Sample dashboards, compliance checklists, and IoT device simulators

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: Foundations of Healthcare IoT

- Module 1: IoT Basics and Healthcare Applications (07:30 - 09:30) • Overview of IoT in medical settings • Key components: devices, networks, platforms
- Module 2: Healthcare Ecosystem and Digital Transformation (09:45 - 11:15) • Smart hospitals, virtual care, and remote diagnostics • Challenges and adoption trends
- Module 3: Use Cases Across Clinical and Operational Domains (11:30 - 01:00) • Patient tracking, ICU monitoring, medication control • Asset management and environmental monitoring
- Module 4: Workshop - Identify IoT Opportunities in Your Facility (02:00 - 03:30) • Map priorities based on clinical needs

Day 2: Sensors, Devices, and Connectivity

- Module 1: Medical Sensors and Wearables (07:30 - 09:30) • ECG, BP monitors, glucose sensors, motion tracking • Designing for accuracy, comfort, and compliance
- Module 2: Connectivity Options in Healthcare (09:45 - 11:15) • Hospital Wi-Fi, Bluetooth LE, Zigbee, cellular, LPWAN • Choosing the right network for your use case
- Module 3: Device Interoperability and Standards (11:30 - 01:00) • HL7, FHIR, DICOM, and integration with EHRs
- Module 4: Hands-On - Review Device Integration Scenarios (02:00 - 03:30) • Practice matching devices to infrastructure

Day 3: Data Management and Analytics

- Module 1: Health Data Collection and Processing (07:30 - 09:30) • Structured vs. unstructured data • Data storage options and latency issues
- Module 2: Real-Time Monitoring and Alert Systems (09:45 - 11:15) • Event-driven alerts, dashboards, and clinician apps
- Module 3: Predictive Analytics and AI in Healthcare IoT (11:30 - 01:00) • AI-based early warning systems and care recommendations
- Module 4: Workshop - Design a Predictive Health Dashboard (02:00 - 03:30) • Create mock KPIs and alert thresholds

Day 4: Cybersecurity, Privacy, and Compliance

- Module 1: IoT Risk Landscape in Healthcare (07:30 - 09:30) • Threats: data breaches, ransomware, DDoS • Unique risks for connected medical devices
- Module 2: Security Controls and Best Practices (09:45 - 11:15) • Encryption, authentication, device hardening, network segmentation
- Module 3: Regulatory Compliance (HIPAA, GDPR, MDR) (11:30 - 01:00) • Legal responsibilities for data use, breach notification, and patient rights
- Module 4: Simulation - Perform a Healthcare IoT Risk Assessment (02:00 - 03:30) • Analyze vulnerabilities and mitigation plans

Day 5: Strategy, Implementation, and Innovation

- Module 1: Planning and Scaling IoT in Healthcare (07:30 - 09:30) • Pilot programs, stakeholder alignment, budgeting
- Module 2: Innovation in Digital Health (09:45 - 11:15) • Telehealth, robotics, cloud-based diagnostics, digital twins
- Module 3: Final Project Presentations (11:30 - 01:00) • Group presentation of an IoT strategy or case study
- Module 4: Wrap-Up and Certification Ceremony (02:00 - 03:30) • Q&A, feedback, and certificate distribution

Certification

Participants will receive a Certificate of Completion in The Internet of Things (IoT) in Healthcare, confirming their ability to design and manage secure, effective, and patient-centered IoT solutions in modern healthcare environments.

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