MAWA EVENTS

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

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DIGITAL TWINNING FOR THE HEALTHCARE INDUSTRY

"Revolutionize Patient Care and Hospital Operations Through Real-Time, Predictive Digital Twin Technology."

Schedule

Venue	Fees
In-House	ASK FOR THE QUOTATION

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

Introduction

This specialized training program equips healthcare professionals, administrators, and digital transformation leaders with the knowledge and tools to leverage **Digital Twins**—dynamic digital replicas of physical entities and systems—for improved clinical decision-making, patient monitoring, and operational efficiency. With applications spanning personalized medicine, hospital asset optimization, and digital diagnostics, this course offers hands-on exposure to healthcare-specific digital twin models powered by IoT, AI, and real-time analytics.

Objectives

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

- Understand the fundamentals of digital twins and their application in healthcare
- Model real-time patient data and clinical pathways using digital twins
- Simulate hospital processes, resource allocation, and emergency response
- Integrate IoT devices, AI models, and EHR systems for dynamic data flow
- Create digital twin strategies aligned with quality care and compliance

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Why Attend

Digital twinning is at the forefront of healthcare innovation—bridging patient care, predictive diagnostics, and operational excellence. This course prepares you to lead the future of healthcare delivery by applying digital intelligence across clinical and administrative systems.

Target Audience

- Hospital and Clinic Administrators
- Healthcare Innovation and Digital Transformation Officers
- Biomedical and Clinical Engineers
- Health IT and Data Analysts
- Public Health Managers and eHealth Strategists

Individual Benefits

- Understand and build digital twin applications for personalized care
- Enhance your role as a digital leader in healthcare transformation
- Apply predictive analytics and simulation to improve decision-making
- Gain a competitive edge in smart hospital and eHealth development

Organizational Benefits

- Reduce patient wait times and improve hospital workflows
- Optimize asset utilization and staffing models
- Increase accuracy in clinical prediction and disease prevention
- Support regulatory compliance and advanced data management

Instructional Methodology

- Case studies from leading digital hospitals and med-tech platforms
- Hands-on labs and interactive simulation exercises
- Use of data modeling tools and patient journey simulations
- Group projects and roadmapping sessions

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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: Foundations of Digital Twinning in Healthcare

Module 1: Overview of Digital Twin Technology & Evolution (07:30 – 09:30)

Module 2: Healthcare Use Cases: From Patients to Equipment (09:45 – 11:15)

Module 3: Key Technologies: IoT, Cloud, AI, and Sensors (11:30 – 01:00)

Module 4: Strategy Alignment with Patient-Centered Care (02:00 – 03:30)

Day 2: Data Architecture and Patient-Centric Digital Twins

Module 1: EHR Integration and Real-Time Patient Monitoring (07:30 – 09:30)

Module 2: Wearables, Telemetry, and IoT in Patient Twins (09:45 – 11:15)

Module 3: Predictive Modeling for Early Diagnosis & Intervention (11:30 – 01:00)

Module 4: Lab: Create a Simple Patient Digital Twin Simulation (02:00 – 03:30)

Day 3: Operational & Facility Management Twins

Module 1: Simulation of Clinical Workflows & Emergency Scenarios (07:30 – 09:30)

Module 2: Hospital Equipment & Infrastructure Twin Modeling (09:45 – 11:15)

Module 3: Resource Optimization: Beds, Staff, ICU, OR (11:30 – 01:00)

Module 4: Case Study: Smart Hospital Digital Twin Architecture (02:00 – 03:30)

Day 4: Governance, Ethics & Data Security

Module 1: Data Governance, HIPAA, and Compliance (07:30 – 09:30)

Module 2: AI Ethics and Bias Mitigation in Medical Models (09:45 – 11:15)

Module 3: Cybersecurity & System Integrity for Digital Twins (11:30 – 01:00)

Module 4: Workshop: Designing a Secure, Ethical Digital Twin Model (02:00 – 03:30)

Day 5: Strategic Planning & Future Innovation

Module 1: Roadmap for Digital Twin Implementation in Healthcare (07:30 – 09:30)

Module 2: Evaluating ROI, KPIs, and Quality Metrics (09:45 – 11:15)

Module 3: Future Trends: AI-Powered Twins, Metaverse Hospitals (11:30 – 01:00)

Module 4: Final Group Presentations & Certification Wrap-Up (02:00 – 03:30)

Certification

Upon successful completion, participants will receive a **Certificate in Digital Twinning for the Healthcare Industry**, demonstrating their readiness to design and lead intelligent healthcare systems.

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.

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