

# MEDICAL TECHNOLOGIES - ARTIFICIAL INTELLIGENCE (AI) & MEDICAL ROBOTS

*“Harnessing AI and Robotics to Revolutionize Modern Healthcare”*

## Schedule

Date	Venue	Fees
18 - 22 May 2026	Dubai, UAE	USD 3495 per delegate

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

## Introduction

Artificial Intelligence and robotics are no longer futuristic tools—they are reshaping how healthcare is delivered, diagnosed, and managed. From robotic surgeries to AI-powered diagnostics and virtual care assistants, medical technologies are advancing precision, accessibility, and patient outcomes.

This 5-day course provides healthcare professionals and administrators with a comprehensive understanding of cutting-edge medical technologies. Participants will explore the latest AI applications in diagnostics and treatment, gain insights into robotic systems in surgery and rehabilitation, and examine regulatory, ethical, and implementation challenges.

## Objectives

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

- Understand AI technologies and their applications in diagnostics and treatment
- Evaluate the design and capabilities of current medical robotics systems
- Assess the impact of AI and robotics on clinical workflows and patient outcomes
- Identify implementation challenges, including data privacy and regulation
- Explore future trends in smart hospitals, telemedicine, and predictive analytics

## Why Attend

- Gain critical knowledge of emerging healthcare innovations
- Understand how AI and robotics improve care delivery and operational efficiency
- Explore real-world use cases of AI in diagnosis, triage, and patient monitoring
- Prepare for digital transformation in hospitals and healthcare systems
- Enhance your organization's readiness for technology-driven healthcare models

## Target Audience

This program is designed for:

- Healthcare administrators and medical directors
- Clinical and biomedical engineers
- IT professionals in healthcare institutions
- Medical practitioners and hospital decision-makers
- Policy-makers and consultants in health technology innovation

## Individual Benefits

Key competencies that will be developed include:

- Understanding of AI models and robotic systems in healthcare
- Ability to critically assess the value and risks of new medical technologies
- Knowledge of digital transformation strategies in clinical settings
- Familiarity with data-driven decision-making in patient care
- Skills in evaluating ethical, legal, and regulatory implications of medical A

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved decision-making for adopting and integrating medical AI/robotic systems
- Enhanced innovation readiness within the healthcare facility
- Greater compliance with data protection and healthcare technology regulations
- Optimized patient care through technology-enhanced practices
- Leadership in digital transformation and smart hospital initiatives

## Instructional Methodology

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

- Strategy Briefings - AI frameworks, robotics systems, and healthcare trends
- Case Studies - AI-driven diagnostics, robotic surgeries, virtual assistants
- Workshops - Designing implementation roadmaps for smart technologies
- Peer Exchange - Hospital innovation benchmarking and tech readiness
- Tools - AI models, decision matrices, risk frameworks, and ethical toolkits

## 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 AI and Robotics in Healthcare

- Module 1: Introduction to Medical AI & Robotics (07:30 - 09:30) • Defining AI, machine learning, and robotics in healthcare context • Evolution and landscape of health technology adoption
- Module 2: Core Technologies and Algorithms (09:45 - 11:15) • Neural networks, computer vision, NLP, and surgical robotics • Hardware and software infrastructure requirements
- Module 3: Regulatory & Ethical Frameworks (11:30 - 01:00) • Patient privacy (GDPR, HIPAA), algorithmic bias, informed consent
- Module 4: Workshop - Identify Use Cases (02:00 - 03:30) • Mapping AI and robotics to your institution's clinical needs

### Day 2: AI Applications in Diagnostics & Patient Monitoring

- Module 5: AI in Medical Imaging and Diagnostics (07:30 - 09:30) • Cancer screening, radiology AI, pathology applications
- Module 6: Predictive Analytics & Early Warning Systems (09:45 - 11:15) • Risk scoring, sepsis detection, and patient deterioration alerts
- Module 7: Virtual Health Assistants and NLP in Care (11:30 - 01:00) • Chatbots, voice assistants, and decision support systems
- Module 8: Workshop - Evaluate Diagnostic AI Tools (02:00 - 03:30) • Hands-on with real datasets and AI platforms

### Day 3: Medical Robotics - Applications and Design

- Module 9: Robotic Surgery and Automation (07:30 - 09:30) • Minimally invasive surgery systems (e.g., Da Vinci) • Setup, control, and capabilities
- Module 10: Rehabilitation and Assistive Robots (09:45 - 11:15) • Exoskeletons, prosthetics, mobility aids
- Module 11: Pharmacy and Logistics Robots (11:30 - 01:00) • Automated drug dispensing, delivery bots, sanitation robotics
- Module 12: Workshop - Assessing Robotic Systems (02:00 - 03:30) • Cost-benefit and implementation readiness assessments

### Day 4: Implementation and Operational Integration

- Module 13: Digital Hospital Infrastructure (07:30 - 09:30) • IoT, 5G, cloud systems, EHR integration for AI use
- Module 14: Workforce Transformation & Training (09:45 - 11:15) • Preparing staff for AI/robot use, change management
- Module 15: Procurement and Vendor Selection (11:30 - 01:00) • Tech evaluation, contract structuring, vendor partnerships
- Module 16: Workshop - Build Your Technology Roadmap (02:00 - 03:30) • Step-by-step action plan for AI/robot implementation

### Day 5: Strategy, Innovation & Future Trends

- Module 17: Global Trends in Medical AI & Robotics (07:30 - 09:30) • What's next: precision health, wearable diagnostics, nanorobots
- Module 18: Business Models and ROI Measurement (09:45 - 11:15) • Value creation, cost reduction, patient outcome metrics
- Module 19: Risk Mitigation & Cybersecurity in Smart Systems (11:30 - 01:00) • Protecting health data and device security protocols
- Module 20: Final Workshop - Innovation Strategy Simulation (02:00 - 03:30) • Group simulation of AI/robot deployment plan in a hospital setting

## Certification

Participants will receive a Certificate of Completion in Medical Technologies - Artificial Intelligence (AI) & Medical Robots, validating their knowledge of healthcare innovation, and readiness to lead or support AI/robotics integration in clinical environments.

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