

DIGITAL MANUFACTURING & DESIGN TECHNOLOGY

“Harness Digital Tools to Transform Manufacturing Operations and Design for the Future.”

Schedule

Venue	Fees
In-House	ASK FOR THE QUOTATION

► Available delivery methods: In-House Training

Introduction

Digital Manufacturing and Design Technology (DMDT) integrates advanced digital tools and smart technologies into the entire product lifecycle—from design and prototyping to production and maintenance. This course empowers engineers, designers, and operations professionals with the skills and strategies to implement Industry 4.0 technologies, including IoT, additive manufacturing, digital twins, AI, and cyber-physical systems, for smarter, more efficient production.

Objectives

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

- Understand the concepts and architecture of Digital Manufacturing
- Implement digital design tools such as CAD, CAM, and PLM systems
- Integrate IoT, AI, and cloud technologies into production workflows
- Apply digital twin and simulation technologies to optimize operations
- Align digital strategies with lean manufacturing and sustainability goals

Why Attend

Whether you're modernizing legacy systems or building smart factories from the ground up, this course helps you bridge the gap between physical and digital environments, reducing time to market and enhancing product quality.

Target Audience

- Manufacturing Engineers and Industrial Designers
- Plant and Operations Managers
- Production Supervisors and Maintenance Engineers
- Quality Assurance and Process Improvement Professionals
- R&D and Product Development Teams

Individual Benefits

- Master digital technologies for smarter, data-driven manufacturing
- Increase design and production efficiency
- Stay competitive with knowledge of advanced tools and platforms
- Gain confidence in digital transformation strategies and tools

Organizational Benefits

- Enhance operational agility and product quality
- Reduce production costs through digital optimization
- Shorten development cycles and improve innovation throughput
- Create a foundation for scalable, future-ready manufacturing

Instructional Methodology

- Case-based learning with real-world industry applications
- Hands-on simulations using CAD, IoT dashboards, and digital twins
- Group projects and interactive workshops
- Technology demonstrations and strategy planning

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 Digital Manufacturing Ecosystems**
- Module 1:** Evolution of Manufacturing: Industry 3.0 to Industry 4.0 (07:30 – 09:30)
- Module 2:** Core Concepts of Digital Manufacturing and Smart Factories (09:45 – 11:15)
- Module 3:** Interoperability & Architecture of Digital Systems (11:30 – 01:00)
- Module 4:** Case Study: Leading Companies in Digital Manufacturing (02:00 – 03:30)
- Day 2: Digital Design & Product Lifecycle Management (PLM)**
- Module 1:** CAD/CAM Integration in Digital Design (07:30 – 09:30)
- Module 2:** Digital Prototyping and Simulation (09:45 – 11:15)
- Module 3:** Product Lifecycle Management (PLM) Systems (11:30 – 01:00)
- Module 4:** Workshop: Optimizing Product Design via Simulation (02:00 – 03:30)
- Day 3: Smart Manufacturing Systems and IoT Integration**
- Module 1:** IoT in Manufacturing: Sensors, Data & Automation (07:30 – 09:30)
- Module 2:** Data Acquisition & Analytics in Real-Time Production (09:45 – 11:15)
- Module 3:** Machine Connectivity, MES, and SCADA Systems (11:30 – 01:00)
- Module 4:** Use Case: Real-Time Decision Making with IoT Dashboards (02:00 – 03:30)
- Day 4: Advanced Tools – Digital Twins, AI & Additive Manufacturing**
- Module 1:** Building and Using Digital Twins in Manufacturing (07:30 – 09:30)
- Module 2:** AI & Machine Learning for Predictive Maintenance (09:45 – 11:15)
- Module 3:** Additive Manufacturing / 3D Printing in Industry (11:30 – 01:00)
- Module 4:** Workshop: Selecting the Right Tech Stack for Operations (02:00 – 03:30)
- Day 5: Strategy, Change Management & Implementation**
- Module 1:** Developing a Digital Manufacturing Strategy (07:30 – 09:30)
- Module 2:** Cybersecurity, Ethics, and Data Governance in Smart Factories (09:45 – 11:15)
- Module 3:** Managing Change and Workforce Upskilling (11:30 – 01:00)
- Module 4:** Final Project Presentation & Certification Wrap-Up (02:00 – 03:30)

Certification

Participants who successfully complete the course will receive a **Certificate in Digital Manufacturing & Design Technology**, recognizing their capability to design and implement digital transformation across manufacturing operations.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: +601116373203	EMAIL: info@mawaevents.net
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