Industrial Digital Transformation Training Course

Professional Development Training Course Outline

Category	General Training	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Industrial Digital Transformation is redefining how manufacturing, energy, logistics, and heavy industries operate in the era of Industry 4.0. By integrating Artificial Intelligence (AI), Industrial Internet of Things (IIoT), Big Data Analytics, Cloud Computing, Digital Twins, and Automation, organizations are achieving unprecedented levels of efficiency, productivity, and predictive capability. Industrial Digital Transformation Training Course is designed to equip professionals with cutting-edge competencies required to lead and implement digital transformation initiatives in industrial environments. It focuses on bridging the gap between traditional operational systems and modern intelligent, connected ecosystems.

In today's hyper-competitive global economy, industries that fail to adopt smart manufacturing, predictive maintenance, edge computing, robotics automation, and real-time data intelligence risk falling behind. This course provides a structured pathway for mastering digital transformation strategies, tools, and frameworks that drive operational excellence, cost reduction, sustainability, and innovation. Participants will gain hands-on exposure to real-world industrial case studies, enabling them to design and implement scalable digital solutions aligned with Industry 4.0 and Industry 5.0 trends.

Programme Curriculum

Industrial Digital Transformation Training Course

Introduction

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Course Duration

5 days

Course Objectives

1. Understand Industry 4.0 architecture and smart factory ecosystems
2. Implement Industrial Internet of Things (IIoT) solutions for real-time monitoring
3. Apply Artificial Intelligence and Machine Learning in predictive maintenance
4. Design Digital Twin models for industrial simulation and optimization
5. Enable cloud-based industrial data integration and analytics
6. Develop cybersecurity frameworks for industrial control systems (OT security)
7. Optimize operations using big data analytics and real-time dashboards
8. Integrate robotics and industrial automation systems
9. Deploy edge computing for low-latency industrial decision-making
10. Improve asset performance through predictive and prescriptive maintenance models
11. Drive sustainability using green manufacturing and energy optimization technologies
12. Implement ERP, MES, and SCADA integration for digital factories
13. Lead organizational change in digital industrial transformation strategies

Target Audience

1. Manufacturing Engineers
2. Plant Managers and Operations Managers
3. Industrial Automation Engineers
4. Data Analysts in Industrial Sector
5. IT/OT Integration Specialists
6. Supply Chain & Logistics Managers
7. Energy and Utilities Professionals
8. Digital Transformation Consultants

Course Modules

Module 1: Industry 4.0 Foundations & Smart Manufacturing

- Evolution from Industry 1.0 to 5.0
- Smart factory architecture and cyber-physical systems
- Industrial value chain digitization
- IoT-enabled production systems
- Real-time manufacturing intelligence
- **Case Study:** Siemens Smart Factory (Germany) digital production optimization

Module 2: Industrial IoT (IIoT) Systems

- Sensor networks and connected devices
- Industrial communication protocols
- Machine-to-machine (M2M) connectivity
- Real-time data acquisition systems
- IoT platform integration
- **Case Study:** GE Predix IIoT implementation in aviation engines

Module 3: Artificial Intelligence in Industry

- Predictive analytics in manufacturing
- Machine learning for quality control
- AI-driven defect detection systems
- Process optimization algorithms
- Computer vision in production lines
- **Case Study:** Tesla AI-driven manufacturing optimization

Module 4: Digital Twins & Simulation

- Digital twin concept and lifecycle
- Real-time simulation of industrial assets
- Predictive modeling and optimization
- Integration with IoT data streams
- Product lifecycle management (PLM)
- **Case Study:** Rolls-Royce engine digital twin monitoring system

Module 5: Industrial Data Analytics & Big Data

- Data lakes and industrial data platforms
- Real-time dashboards and KPI tracking
- Descriptive, predictive, prescriptive analytics
- Data visualization tools
- Decision intelligence systems
- **Case Study:** Coca-Cola bottling plant analytics optimization

Module 6: Industrial Automation & Robotics

- Programmable logic controllers (PLC)
- Robotic process automation (RPA) in industry
- Collaborative robots (cobots)
- Automated production lines
- Human-machine collaboration systems
- **Case Study:** Amazon warehouse robotics automation system

Module 7: Cybersecurity in Industrial Systems

- OT vs IT security frameworks
- Industrial control system (ICS) security
- Risk assessment and threat modeling
- Network segmentation strategies
- Incident response in industrial environments
- **Case Study:** Colonial Pipeline cyberattack response analysis

Module 8: Cloud, Edge Computing & Smart Integration

- Cloud manufacturing ecosystems
- Edge computing for real-time processing
- Hybrid cloud industrial systems
- API-based system integration
- ERP-MES-SCADA convergence
- **Case Study:** Bosch connected industry cloud platform

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com