

Digit-T: Online Course Structure

Management in I4.0

1. Fundamental Concepts of I4.0

- 1.1 Introduction to Industry 4.0
- 1.2 Digital Transformation: Why so much hype?
- 1.3 Key Enabling Technologies Related to I4.0

2. Towards an Intelligent and Connected Industry

- 2.1 Challenges and Keys for a Successful Digital Transformation
- 2.2 What is Technology Roadmapping?
- 2.3 Diagnostics for Digital Transformation, Technology Maturity Level
- 2.4 Opportunities and Challenges, Strategy Definition
- 2.5 I4.0 Roadmap: Implementation and Refinement

3. Human Resources Management in I4.0

- 3.1 Workforce Evolution in I4.0 + Skills 4.0 Key Professional Competencies
- 3.2 Team Management and Collaborative Teamwork in the Connected Industry
- 3.3 Life Long Learning Strategies, Paradigms for I4.0

Advanced Manufacturing Systems

1. Manufacturing Systems Strategies

- 1.1 New Product Introduction Strategies
- 1.2 Characteristics and Enabling Technologies for Reconfigurable and Flexible Assembly Systems
- 1.3 Large Scale Assembly

2. Manufacturing Systems Modelling and Simulation

- 2.1 Manufacturing Systems Analysis
- 2.2 Queueing Theory
- 2.3 Digital Twin Concept
- 2.4 Modelling Tools and Software

3. Sensing and Data Collection

- 3.1 Sensors and Sensor Networks in Digital Manufacturing
- 3.2 Product Tracking (Performance and Regulatory Aspects)
- 3.3 Preventative, Corrective and Predictive Maintenance Systems
- 3.4 Metrology Assisted Assembly

4. Manufacturing Data Analysis and Decision Making

- 4.1 Quality Strategies and Technologies in Digital Manufacturing
- 4.2 Intelligent Decision Making
- 4.3 Data and Data Analysis
- 4.4 Process Optimization by Data Mining and Machine Learning

Intelligent Robotics

1. Industrial and Collaborative Robots

- 1.1 Cyber Physical Production Systems and Industrial Robots
- 1.2 Human-Robot Collaboration
- 1.3 Safety: Industrial Standards and Equipment
- 1.4 Robotic Applications (including Robotic Assembly)

2. Sensors, Actuators and Control Systems

- 2.1 Sensing Systems for Robotics
- 2.2 Actuators for Robotics
- 2.3 Robot Motion Planning and Programming
- 2.4 Robot Control

3. Advanced Robotics

- 3.1 Micro-Robotics
- 3.2 Mobile Robots
- 3.3 Robotics and Artificial Intelligence
- 3.4 Ethical Issues in Robotics

Access the training course at training.digit-t.eu

"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

Co-funded by the
Erasmus+ Programme
of the European Union

