

€ TRAINING

Design for Manufacturing and Assembly
DFMA



1 - 5 June 2025
Dubai (UAE)



Design for Manufacturing and Assembly DFMA

REF: O2715 DATE: 1 - 5 June 2025 Venue: Dubai (UAE) - Fee: 5830 Euro

Introduction:

This training program delves into the principles of Design for Manufacturing and Assembly DFMA, focusing on optimizing product designs for ease of manufacturing and assembly processes. It empowers participants to create efficient, cost-effective designs that enhance production quality and reduce time to market.

Objectives:

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

- Understand the core principles of DFMA.
- Identify design elements that can simplify manufacturing and assembly.
- Analyze product designs for cost-saving opportunities.
- Collaborate effectively with manufacturing teams to optimize designs.
- Implement DFMA strategies to improve product quality and efficiency.

Target Audience:

- Product Designers.
- Manufacturing Engineers.
- Process Engineers.
- R&D Engineers.
- Operations Managers.

Program Outline:

Unit 1:

Introduction to DFMA Principles:

- Definition and importance of DFMA.
- Key principles of design simplification.
- Reducing part count and complexity.

- Identifying potential manufacturing and assembly issues early in the design phase.
- Benefits of DFMA for product quality and cost.

Unit 2:

Design for Manufacturing DFM:

- Principles of DFM and its role in product development.
- Material selection for manufacturability.
- Methods of Designing for efficient fabrication processes.
- Reducing manufacturing costs through smart design choices.

Unit 3:

Design for Assembly DFA:

- Core principles of DFA.
- Minimizing assembly time and errors.
- Methods of Designing for automated and manual assembly.
- Reducing the number of fasteners and assembly tools.
- Best practices in DFA for improving product reliability.

Unit 4:

DFMA Analysis and Optimization:

- DFMA tools and software for evaluating designs.
- Performing cost analysis using DFMA techniques.
- Identifying areas for design improvement.
- Importance of Collaborating with cross-functional teams to refine designs.
- Case study: Optimizing a product design using DFMA.

Unit 5:

Implementing DFMA in Product Development:



- Integrating DFMA into the product development process.
- Creating design guidelines for DFMA.
- Importance of Training teams on DFMA principles.
- Continuous improvement using DFMA feedback.
- Monitoring and measuring DFMA success in production.