

COURSE INFORMATION SHEET

Failure Mode and Effects Analysis (FMEA)

Objective

The objective of this course is to equip participants with a practical and comprehensive understanding of the AIAG & VDA Process FMEA (PFMEA) methodology. The course enables learners to apply the structured 7-step PFMEA approach to proactively identify, analyse, and mitigate technical and process risks in manufacturing. Emphasis is placed on risk reduction, prevention of process failures, and continuous improvement through effective team-based PFMEA application.

Content

- Introduction to PFMEA and its role in risk-based thinking
- Integration of PFMEA within project and quality management systems (APQP linkage, process design)
- The 7-Step PFMEA Methodology: Planning & Preparation, Structural Analysis, Function Analysis, Failure Analysis, Risk Analysis, Optimisation, and Results Documentation.
- Use of foundation and family PFMEAs
- Linking PFMEA to Process Flow Diagrams and Control Plans
- Common pitfalls and best practices in PFMEA application
- Using PFMEA as a living document to drive sustainable improvements
- Real-world case studies and exercises based on manufacturing process examples

Duration

2 Days

Assessment

Participants will complete:

- A multiple-choice knowledge assessment
- A case-based group PFMEA exercise

Successful candidates will receive a Certificate of Competence.

Pre-requisites

A basic understanding of quality, manufacturing, or process engineering is recommended. Prior exposure to FMEA, APQP, Control Plan or ISO/IATF 16949 is useful but not mandatory.

Target Audience

- Process and Manufacturing Engineers
- Quality Engineers and Quality Managers
- Production and Process Supervisors
- Supplier Quality Assurance Professionals
- APQP and Risk Management Practitioners
- Anyone responsible for process development, process improvement, or operational

Training Methodology

The course uses a combination of:

- Instructor-led presentations, Interactive group discussions and feedback
- Real-world case studies
- PFMEA form exercises aligned to the AIAG & VDA handbook
- Interactive group discussions and feedback
- Structured PFMEA document reviews and team activities