

FAILURE MODE AND EFFECTS ANALYSIS (FMEA)

Introduction:

Failure Modes and Effects Analysis (FMEA) is a valuable tool for preventing failure in both product and process design. FMEA is not a form to be completed alone by the responsible engineer after the design has been completed. FMEA should be planned to coincide with product development when risks can be mitigated to an acceptable level in advance of product or process release. This course helps you implement this vital methodology while analyzing risks, determining areas in need of action, and applying FMEA techniques.

Course Objectives:

Upon completion of the training, participants will be equipped with the following skills:

- Learn the Basic Concepts, Purpose & Benefits of FMEA.
- How to implement FMEA.
- Examine how to use Severity, Occurrence and Detection Scales.
- Discover how to calculate Risk Priority Number (RPN) and how to prioritize RPNs.
- Application and practice of skills in FMEA techniques.
- Identifying and assessing the actual and potential failures in product and process designs.

Course Contents:

1. Introduction to FMEA
 - What is FMEA?
 - Benefits of FMEA
 - Compare and contrast the different types of FMEA
 - Relationship of FMEA with Continuous Improvement tools
2. Strategies for the Implementation
 - When is FMEA started?
 - Team selection matrix
 - Process FMEA planning
 - Organizing the potential failure modes
3. Methodology and steps in developing and applying an FMEA
 - How to construct an FMEA?
 - Tools for Data analysis
 - Brainstorming, Root Cause Analysis, Cause & Effect Metrics
 - The 14 steps approach

- Understanding the differences and relationship between failure mode, cause and effect
- Severity, Occurrence, and Detection probability assessment and rating
- Risk and Priority Ranking
- Corrective Actions

4. Driving and Sustaining the improvements

- FMEA RPN waterfall charting process
- Control and reaction plan methodology
- Step by step approach on the control plan requirements
- Applying various process control methods

Templates that can be used for implementation at workplace will be given to participants during the training.

Training Methodology:

Combination of lecture with practical/hands-on approach such as exercises, case studies, application, presentation and group discussion.

Who Should Attend:

Engineers and Technical Personnel involved in the functions of Design and Development, Process Planning, Product Engineering, Application Engineering, Quality Assurance, R&D, Manufacturing and Servicing etc.

Award of Certificate:

Participants will be issued with a Certificate of Successful Completion upon meeting 75% of the required course attendance.

Duration:

2 days (14 hours)

Course Fee:

\$450 nett per trainee (GST is not applicable).

(Course fee is inclusive of all training materials and light refreshments.)