

Fault Modes and Effect Analysis (FMEA) Training

Dr. John Brian Anthony

What Is FMEA? **Failure Mode and Effects Analysis (FMEA)** is a procedure for analysis of potential failure modes within a system for the classification by severity or determination of the failure's effect upon the system. It is widely used in the manufacturing industries in various phases of the product life cycle. Failure causes are any errors or defects in process, design, or item especially ones that affect the customer, and can be potential or actual. *Effects analysis* refers to studying the consequences of those failures.

Course Objectives

Learners will be able to:

1. Describe the purpose of an FMEA and explain the benefits of using FMEAs in both design and safety and process engineering situations.
 2. Explain the ten steps to conducting an FMEA.
 3. Contribute effectively to an FMEA team.
 4. Customize FMEA rating scales.
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Course Content

FMEA Overview

Introduction	An overview of what an FMEA is; how the FMEA process works; and why an FMEA is used.
Purpose of an FMEA	An explanation of how an FMEA helps identify risks, prioritizes the risks relative to one another, and focuses efforts on an action plan to reduce the risks.
DFMEA or PFMEA?	An explanation of the differences between a Design-FMEA and a Process-FMEA.
The FMEA Process	A preview of the 10 steps used to conduct an FMEA. The same basic steps apply to both a DFMEA and a PFMEA.
Assembling an FMEA Team	Helpful hints on assembling an effective FMEA team.

- Design FMEAs

Design FMEA Scope	How to clarify the scope for a DFMEA. Details on how to use the DFMEA Scope Worksheet.
10 Steps to Conduct a DFMEA	Step-by-step directions on conducting a DFMEA. Guidance on the use of the FMEA Analysis Worksheet. Techniques for customizing the Severity, Occurrence, and Detection Ranking Scales for a DFMEA.
DFMEAs & Control Plans	Using the DFMEA Analysis to develop input for a Process Control Plan.
Getting More Out of Your DFMEA	Tips on the best times in a product's life cycle to conduct a DFMEA. Tips on how to use the results of an FMEA to trigger continuous improvement.
DFMEA Example	An example of the application of a DFMEA, working through all 10 steps.
Cognitive Function	Comparison / relationship/problem solving

Duration: 3 days

Cost: \$1200 per pax