

FAILURE MODE & EFFECT ANALYSIS (FMEA)

<1-Day Program>



Overview

Failure Mode Effects Analysis (FMEA) is a systematic methodology used to identify failure modes and reduce the risk of failures. FMEA involves the assessment of probability of Occurrence of potential causes of failures in a process, the Effect of the failure and the Effectiveness of Control mechanisms.

When a process is identified as high risk, action can be taken to reduce the Probability of the failure cause, the Severity of the failure and to improve the Control mechanisms BEFORE the failure occurs. This results in cost savings, improved quality and reduced liability.

FMEA is best utilised at the design stage of a new product or a new process and is applicable across industries. It can also be used to improve existing products and processes.

This course provides the instructions on conducting an FMEA.

Learning Outcomes

Upon completion of this program, participants will be able to:

1. Understand the benefits of FMEA.
2. Identify high risk processes.
3. Use the Process FMEA to improve the product or process and reduce failures reaching the customer.

Who must attend

This program is beneficial for executives, supervisors, engineers and managers with responsibilities for issue prevention and resolution and for process improvement.

Methodology

This program includes presentations, discussions, examples and group discussions to enable participants to practise FMEA. Participants are advised to identify Failure Modes in their areas of responsibility as they will also be guided to apply FMEA in their own functional areas in the exercises.

Course Outline

9:00 am: Module 1 – Introduction to Process FMEA

- Definition and Benefits of FMEA

9:30 am: Module 2 – Initiating FMEA

- Defining the Failure Mode
- Identifying Team Members
- Defining Ranks

10:30 am: Module 3 – Steps to Conduct FMEA

11:00 am: Module 4- Teamwork & Brainstorming

11:30 am: Module 5 – Probability of Occurrence

1:30 pm: Module 6 – Severity of Failure

2:30 pm: Module 7- Effectiveness of Detection

4:00 pm: Module 8 – Risk Probability Number

4:30 pm: Module 9 – Improvement based on Process FMEA

- Cause elimination / reduction
- Severity Reduction
- Failure Detection