



Failure Modes and Effects Analysis

(8 hours)

Audience and Purpose:

Course is developed to assist Engineer and Managers in reducing risk and solving problems with new and existing products and processes in order to reduce defects and failures. This course is designed for those individuals who work on various aspects of product development, new process introduction and manufacturing. It is assumed they come from many different backgrounds, disciplines, education levels and will be working on a variety of product and process areas across many departments of the company

Software: Excel

Prerequisites: None

Course Objectives:

Upon completion of the course the participants will be able to:

- Understand the various types of FMEAs
- Apply the basic steps for FMEA generation
- Know when and how to apply FMEA to product designs and internal processes
- Identify potential design or assembly issues which will impact customer product performance, PPM rates and yields.
- Prioritize and manage improvement opportunities from FMEA results

Course Outline:

Section I	Introduction to FMEA History of FMEA The FMEA method When should FMEA be developed? Benefits
Section II	FMEA Preparation Identify FMEA participants Determine scope and objectives Organize and review relevant data
Section III	FMEA Generation Develop process flow diagram Identify potential failure mode Determine effects of failure mode Identify potential causes of the failure Determine potential controls for causes Determine current containment for failures Compute RPNs for each potential failure
Section IV	FMEA Action Plans Prioritize failure modes Determine recommended actions Assign owners Verify effectiveness with new data Review and update FMEA