

Workshop: FMEA Analysis

Date: 2013-12-
Venue: Your Company

The goal of the course is to introduce the most widely used reliability method FMEA (=Failure Modes and Effects Analysis). Product designs can be improved with Functional FMEA and Component FMEA. Furthermore, the QS-9000 standard describes the methods Design FMEA, including Process FMEA for manufacturing system improvements. Applications in electronics, control systems and sw will be discussed. The students will learn how to complete a successful FMEA-project, including effective FMEA documenting tools and practices. Bring a scientific calculator with you.

FMEA Analysis	
8:15	<i>WELCOME and introduction to course program + coffee</i>
8:30 – 11:45	1. Reliability Engineering Basics - Reliability terms and concepts: failure definitions - Selecting methods, ensuring sufficient risk detection
	2. Introduction to FMEA - Generic FMEA forms - Different types of FMEA, how to select
	- Exercises: Understanding failures
11:45	<i>LUNCH</i>
12:15 - 16:15	- Exercises/ team work: Failure severity ranking using Risk Priority Number (RPN)
	3. System Description in FMEA: Product Tree or Block Diagram - Using Product Tree or Functional Block Diagram in FMEA - Functional FMEA vs. Component FMEA.
	<i>COFFEE break</i>
	- Exercises / team work: System Analysis, a.Functional FMEA, b.Component FMEA
	4. Design FMEA, Process FMEA and other FMEA applications - D-FMEA and P-FMEA forms, examples of D-FMEA and P-FMEA - FMEA applied to electronics, automation and software systems
	5. Summary - FMEA tips and Tricks - System improvement and FMEA
	<i>CONCLUSIONS, discussion</i>

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