

## Workshop: FMEA Analysis

**Date:** 2014-01-29  
**Venue:** Airport Hotel, Oulu

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. The students will learn how to complete a successful FMEA-project, including effective FMEA documenting tools and practices. Bring a scientific calculator with you.

<b>FMEA Analysis</b>	
<b>8:00</b>	<i>WELCOME and introduction to course program + coffee</i>
<b>8:30</b>	<b>1. FMEA and Reliability</b> - Reliability terms and concepts: failure definitions - Selecting methods, ensuring sufficient risk detection
<b>10:15</b>	<i>COFFEE break</i>
	<b>2. Performing FMEA</b> - Generic FMEA, steps to perform FMEA - Risk classification, RPN - Exercises: Understanding failures
<b>12:00</b>	<i>LUNCH</i>
<b>13:00</b>	- Exercises/ team work: Failure severity ranking using Risk Priority Number (RPN)
<b>14:15</b>	<b>3. Different FMEA types</b> - Functional FMEA, Component FMEA - D-FMEA, P-FMEA, SW-FMEA.
	<i>COFFEE break</i>
	- Exercises / team work: System Analysis, a.Functional FMEA, b.Component FMEA
	<b>4. FMEA Organisation</b> - D-FMEA and P-FMEA forms, examples of D-FMEA and P-FMEA
	<b>5. Summary</b> - FMEA possibilities in system improvement
<b>16:30</b>	<i>CONCLUSIONS, discussion</i>

**Lecturer:**

Mr. Antti Lyytikäinen, M.Sc., Reliability Academy

tel: +358-400-800 022 or +358-9-884 3066

email: [info@reliabilityacademy.fi](mailto:info@reliabilityacademy.fi)