

Workshop: Risk Analysis (day 1)

Date: 27-28.05.2015
Venue: Technopolis Ruoholahti, Helsinki

The goal is to introduce the principles of the most widely used risk analysis methods. The students will learn how to select suitable risk analysis methods for their technology projects. The basics of the risk magnitude estimation are presented. The organization of a risk analysis project is discussed, including effective risk management tools, documenting and practices. **Bring a scientific calculator with you.**

Risk Analysis	
8:00	<i>WELCOME and introduction to course program + coffee</i>
8:30	1. Basic Terms and Concepts <ul style="list-style-type: none"> - Risk analysis importance - Concepts, definitions, terms, standards
10:15	<ul style="list-style-type: none"> - Risk analysis methods, principle, selection, ensuring sufficient risk detection
	<i>COFFEE break</i>
	2. Preliminary Risk Analysis <ul style="list-style-type: none"> - Potential Problems Analysis, Hazard Analysis, simple risk detection - Risk magnitude, how to calculate and use in risk classification
	- Exercises
12:00	<i>LUNCH</i>
13:00	- Exercises/ team work
	3. Risk Analysis for Processes and Systems <ul style="list-style-type: none"> - Process structure, subsystems, operational modes - Methods, overview: Hazop, FMEA, Action Error Analysis, RAM etc. - Risk reduction, SIL, LOPA
14:15	<i>COFFEE break</i>
	- Exercises / team work
	4. Risk Management Systems <ul style="list-style-type: none"> - Risk management system: basic tools, documenting - Risk management, Reliability management, Safety management, examples
	5. Summary <ul style="list-style-type: none"> - Overview - Discussion: Minimum requirements in a technology project.
16:30	<i>CONCLUSIONS, discussion</i>

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Price: 2-day course: 950 eur/ person. 1-day separately: 550 eur/ person. Included: Course materials, lunch and coffee.

Cancellation: Cancellation latest 1 week before (=20.5.2015), after that 50 % fee is charged.
 A person may be substituted by another. If the cancellation is not made, the whole fee will be charged.

Workshop: FMEA Analysis (day 2)

Date: 27-28.05.201
Venue: Technopolis Ruoholahti, Helsinki

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 or Component FMEA. Furthermore, the Quality standards describe the methods Design FMEA and Process FMEA for manufacturing systems. The students will learn how to complete a successful FMEA-project, including effective FMEA documenting tools and practices used by professionals. **Bring a scientific calculator with you.**

FMEA Analysis	
8:00	<i>WELCOME and introduction to course program + coffee</i>
8:30	1. FMEA and Reliability <ul style="list-style-type: none"> - Reliability terms and concepts: failure definitions - Selecting methods, ensuring sufficient risk detection
10:15	<i>COFFEE break</i>
	2. Performing FMEA <ul style="list-style-type: none"> - Generic FMEA, steps to perform FMEA - Risk classification, RPN
	- Exercises: Understanding failures
12:00	<i>LUNCH</i>
13:00	- Exercises/ team work: Failure severity ranking using Risk Priority Number (RPN)
	3. Different FMEA types <ul style="list-style-type: none"> - Functional FMEA, Component FMEA - D-FMEA, P-FMEA, SW-FMEA.
14:15	<i>COFFEE break</i>
	- Exercises / team work: System Analysis, a.Functional FMEA, b.Component FMEA
	4. FMEA Organisation <ul style="list-style-type: none"> - Analysis team, design support, typical mistakes - Tools
	5. Summary <ul style="list-style-type: none"> - FMEA possibilities in system improvement - Application examples
16:30	<i>CONCLUSIONS, discussion</i>

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