

## Workshop: Reliability Engineering Basics

**Date:** 2014-10-  
**Venue:** Espoo

The goal of the course is to give the engineers and designers a basic understanding of the Reliability techniques and practical tools which will support system analysis and design. Through exercises and team work the students will be familiarized with the Reliability terms, methods and concepts. Prior knowledge of the basic statistical methods will be helpful. Bring a scientific calculator with you.

<b>Reliability Engineering Basics</b>	
<b>8:00</b>	<i>WELCOME and introduction to course program + coffee</i>
<b>8:15</b>	<b>1. Basic Terms and Concepts</b> - Terms, concepts and parameters - Reliability calculations: Failure rate, MTBF, MTTF, MTTR
<b>10:15</b>	<i>COFFEE break</i>
	<b>2. Reliability of Systems</b> - Series and Parallel systems - Repairable and Non-repairable systems
	- Exercises / team work
<b>12:00</b>	<i>LUNCH</i>
<b>13:00</b>	<b>3. Reliability and Risk Analysis methods</b> - Overview of the most widely used analysis methods
	<b>4. Reliability of Electronics</b> - Failure modes of electrical components - Parts count and MIL-217 methods: calculation of MTBF - Basics of Reliability Testing
<b>14:15</b>	<i>COFFEE break</i>
	- Exercises / team work
	<b>5. Reliability Management</b> - Reliability Engineering activities and timing in Product Development
<b>16:30</b>	<i>CONCLUSIONS, discussion</i>

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