

## **Functional Safety Training- Software Safety Concept Day 1**

- 09:00 – 09:30      Introduction**
1. FSS Hamburg – who we are
  2. Overview of ISO 26262 and its importance
  3. Safety standards in the software area
  4. Functionally safe systems
- 09:30 – 09:45      Tea & Coffee Break**
- 09:45 – 11:00      How to develop a safety concept at software level?**
5. Overview of the ISO 26262 Part 6
  6. Key steps in developing a software safety concept
  7. Documentation throughout the development process
  8. Best practices and common pitfalls
- 11:00 – 11:15      Checkpoint and Break**
- 11:15 – 12:00      Software Safety Requirements**
9. Software safety requirements within the functional safety context
  10. Verification of software safety requirements
  11. Template: Functional Safety software requirements
- 12:00 – 13:00      Lunch Break**
- 13:00 – 14:30      Software Safety Architecture**
12. Importance of software architectural design in functional safety
  13. Design strategies for safety-critical software
  14. How do you show „freedom from interference“?
  15. Error detection and handling
  16. Verification of software architecture
- 14:30 – 14:45      Tea & Coffee Break**
- 14:45 – 16:00      Software safety analyses**
17. Introduction to safety analyses in ISO 26262
  18. Failure modes and effects analysis (FMEA)
  19. Fault tree analysis (FTA)
  20. Dependent failure analysis (DFA)
  21. Hazard and operability analysis (HAZOP)
  22. Integrating safety analyses into the development process
- 16:00 – 16:30      Concluding Round and Questions**

## **Functional Safety Training- Software Safety Concepts Day 2**

<b>09:00 – 09:30</b>	<b>Recap of Training Day 1</b>
<b>09:30 – 09:45</b>	<b>Tea &amp; Coffee Break</b>
<b>09:45 – 11:00</b>	<b>Essential Functional Safety Knowledge</b> <ol style="list-style-type: none"><li>1. Risk Matrix and impact on software</li><li>2. Fault types according to the norm ISO 26262</li><li>3. What are the hardware metrics in ISO 26262 and its impact on software</li><li>4. How to deal with ISO 26262 software methods?</li><li>5. Solution for unexamined deliverables</li></ol>
<b>11:00 – 11:15</b>	<b>Checkpoint &amp; Break</b>
<b>11:15 – 12:00</b>	<b>Safety element out of context</b> <ol style="list-style-type: none"><li>6. What does SEooC stand for?</li><li>7. In which uses cases can it be applied</li></ol>
<b>12:00 – 13:00</b>	<b>Lunch Break</b>
<b>13:00 – 14:30</b>	<b>Commercial off the shelf (COTS)</b> <ol style="list-style-type: none"><li>8. Identification and selection of COTS</li><li>9. Integration and adaptation</li><li>10. Verification and validation</li><li>11. Safety monitoring and maintenance</li><li>12. Can-stack of Vector</li></ol>
<b>14:30 – 14:45</b>	<b>Tea &amp; Coffee Break</b>
<b>14:45 – 16:00</b>	<b>Safety Tasks for SW Developers to do</b> <ol style="list-style-type: none"><li>13. Software Component Qualification</li><li>14. HW – SW Interface Specification</li><li>15. Decomposition according to ISO 26262</li><li>16. Decomposition basics</li><li>17. ASIL misconceptions</li><li>18. ASIL decomposition (Example: Motor Control Function)</li></ol>
<b>16:00 – 16:30</b>	<b>Concluding Round and Questions</b>

In our trainings we focus on providing you with the necessary information and tools you need to implement functional safety quickly and effectively in your occupational routine. We combine theoretical knowledge with engaging exercises and always leave enough room for further questions.

For any inquiries contact us via [buero@functional-safety-solutions-hamburg.com](mailto:buero@functional-safety-solutions-hamburg.com).

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