

Development of safety related Software, Analysis & Testing acc. to ISO 26262

General: Training contents can be discussed and agreed in preparation of the specific training. So the training can be adjusted to the special needs.

The exida approach is to explain how the ISO 26262 requirements can be fulfilled, and not only to show the requirements of the ISO 26262.

Language: Selectable between German and English, training material will be in English

Duration: 1.5 days, can be extended based on possible additional agreed topics

Date: For In-House trainings this will be agreed together

For public trainings please refer to:
<http://www.exida.com/Germany/Schedule>

Location: selectable, in-house or public trainings please refer to
<http://www.exida.com/Germany/Schedule>

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Content:

- One and a half day training on development of Software considering Functional Safety, Verification & Testing techniques according to ISO 26262
- Addressing the process requirements and the required tool set from the ISO 26262 tables
- System-level (item verification) and hardware/software interface related issues are mentioned on a summarizing level to provide a comprehensive understanding of Functional Safety Management of the Software
- All main sections include examples and exercises with example solutions.

Who should attend?

- Development Engineers (System, Software)
- Safety Managers
- Software Project Leaders
- Software Quality Responsible

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Agenda

- From concept to system decomposition: What software people must know.
- Software Development Process (ISO 26262 - Part 6)
 - Content of the Software Safety Process
 - Initiation and tailoring
- Software Safety Requirements Specification:
 - Sources of Software Safety Requirements and interfaces to System Level
 - Interpretation of properties and attributes required by ISO26262
 - Practical methods how to derive and detail requirements for the software
 - Methods for the verification of Software Safety Requirements
- Hardware Software Interface Specification
 - Interfaces to the Software Safety Requirements and Software Architecture
- Software Architecture:
 - How to develop a Software Architecture acc. to ISO26262
 - Semi-formal architecture development - interpretation of ISO26262
 - Measures to be considered
 - ASIL Decomposition at the software level
 - How to implement Freedom from Interference
 - Safety requirements allocation to software architectural components
 - Methods for the verification of the Software Architecture.
- Software Unit Design
 - Content of a semi-formal Software Unit Design Specification
 - Interpretation of design requirements recommended by ISO26262
 - How to deal with OO programming languages (C++)
 - Methods for the verification of the software unit design
- Software Safety Verification
 - Software Analysis Techniques
 - Software Criticality Analysis

- Software Dependent Failure Analysis
 - Software Testing Techniques (Unit and Integration Testing)
 - Requirements based (Equivalence Classes, Boundary Values, etc.)
 - Structure based (Statement Coverage, MCDC, Call Coverage, etc.)
- Tool classification and qualification
- Software qualification, how to deal with existing components.

