

Technical Training Course

ISO 26262 for Safety-related Automotive Systems Development Training Course



1.04.2014 - 3.04.2014

TECNALIA
C/ Velázquez, 64-66
Madrid

PRESENTATION

ISO 26262 is the adaptation of IEC 61508 to comply with needs specific to the application sector of E/E systems within road vehicles. This adaptation applies to all activities during the safety lifecycle of safety-related systems comprised of electrical, electronic, and software elements that provide safety-related functions.

With the trend of increasing complexity, software content and mechatronic implementation, there are increasing risks from systematic failures due to software. ISO 26262 includes guidance to avoid these risks by providing feasible requirements and processes.

TECNALIA, in collaboration with **INTECS SpA**, provides a comprehensive and intensive three day course with all the major features of the standard, together with an overview of implementation techniques. The course provides discussion on how to apply the rigor required by the standard to the development project but with attention to costs and time to market.

WHO SHOULD ATTEND

- System, Hardware and Software Engineers (Development and Verification)
- Quality Engineers
- Configuration Managers
- Test Engineers
- Project Managers

AGENDA

DAY ONE: Tuesday, April 1, 2014

Introduction to ISO 26262

History and status.
Legal implications.
Relationship to 61508, MISRA.

The 26262 safety lifecycle

Overview of the lifecycle.
Concepts and terminology.

Functional Safety Management

Safety management and culture.
Concepts of independence.
Relationship to SPICE, etc.

Hazard analysis in ISO 26262

Item definition and management.
Hazard identification & safety goals.
Automotive safety integrity levels (ASIL).
Practical issues in ASIL determination.
Safety Case management.

Safety Element out of Context

The 26262 "component".
Software component qualification.
Hardware component qualification.
Presentation of Opencoss project and the relations with ISO26262.

DAY TWO: Wednesday, April 2, 2014

Functional safety concept

Derivation of safety requirements.
The safety requirements hierarchy.
Safety architecture and ASIL allocation.

System Level Functional Safety

Technical safety requirements and the technical safety concept.
Introduction to safety analyses.
Hardware / software interface.
Safety validation.

Functional safety at hardware level

Hardware level design.
The ISO 26262 fault model.
Hardware architecture metrics: Single faults and latent faults.
Concepts and control of random failures: diagnostic coverage.
Metrics calculation example.
Two methods: probability of violation of safety goal due to random error.

DAY THREE: Thursday, April 3, 2014

Functional Safety at Software Level

Coverage of the entire V-lifecycle.
Software safety analysis.
Model based development.
Software Configuration.

Production and Operations

Planning for production and operations.
Production issues.
Field data collection.
Maintenance and manuals.
Decommissioning.

ASIL Oriented Analyses

ASIL Decomposition.
Dependent failures analysis.
Criteria for coexistence of elements.

Supporting processes

Classic supporting processes.
Safety requirements management.
Distributed development.
Software tool qualification.
Proven in use arguments.

Organiser



Collaborator



the Brainware company

Venue:

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Information and Registration:

The course's price is 1,150 € and it will be entirely delivered in English.

For the registration it is required to make payment of the fee to the following bank account and send the payment receipt via email to Eva Salgado (eva.salgado@tecnalía.com):

BANCO SABADELL: 0081-5182-52-0001107811 - 1,150 €

Acceptance of the booking is subject to availability and it will be confirmed in writing. For more information and registration details contact Eva Salgado or have a look at the **course's website**, where you will also be able to get registered.

TECNALIA is the first private applied research centre in Spain and one of the most important in Europe. A combination of technology, tenacity, efficiency, courage and imagination.

As we are aware that the world evolves rapidly, we get ahead of future challenges by turning technology-based business opportunities into competitive advantages.