Build your knowledge of the safety life cycle for on-road vehicles

Engineering overview training on automotive functional safety

This two-day introductory training course covers the full 12-part ISO 26262:2018 Road vehicles – Functional safety standard for automotive systems, with an emphasis on the standard's impact on engineering processes and products. This course utilizes multiple interactive examples throughout to demonstrate key concepts of ISO 26262 implementation.

Day 1 topics:

- Background and scope of ISO 26262
- Second edition changes
- Key definitions of terms
- Concepts of functional safety management
- Hazard analysis and risk assessment (HARA)
- Functional safety concept (FSC) and technical safety concept (TSC)
- Introduction to hardware development

Day 2 topics:

- Hardware architectural metrics and failure modes, effects and diagnostic analysis (FMEDA)
- Product development at the software level
- Software tool qualification
- System and item integration, testing and safety validation
- Production, operation, service and decommissioning
- Supporting processes
- Heavy truck and bus, semiconductor and motorcycle key points

Target audience

- Hardware and software developers
- Systems and safety engineers
- Computer and electrical engineers
- Quality and reliability engineers
- Safety managers
- Engineering managers
- Technical marketing and sales professionals

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Understand ISO 26262:2018 processes from concept to production

Objectives

Upon successful completion of this workshop, you will be able to:

- Apply key safety management concepts for automotive electronic programs
- Recognize potentially hazardous risks and malfunctioning behaviors of electronics and software-intensive systems
- Implement ISO 26262 engineering processes in your hardware, software and systems engineering development programs
- Understand and compute the hardware fault metrics as described in ISO 26262, Part 5
- Develop embedded system software for safety related systems according to the requirements of ISO 26262, Part 6
- Understand the functional safety life cycle according to ISO 26262, Parts 3, 4, 5, 6 and 7
- Identify changes made in the second edition of ISO 26262 including expanded scope for heavy trucks and buses, motorcycles and semiconductors

Why choose kVA by UL?

Our team's expansive knowledge of the automotive product development lifecycle sets us apart in the functional safety industry. From hazard analysis to functional design and validation target-setting, the engineers at kVA by UL understand safety for complex electronic systems.

Expert trainers – kVA by UL's trainings provide an in-depth overview of the methodologies used in the ISO 26262 and ISO 21448 standards. Our trainers are experienced automotive engineers who have designed and validated real-world automotive systems at major automotive companies worldwide.

Advisory support – Our services span across autonomous vehicles, connectivity of electronic modules and infotainment, semiconductors, cybersecurity and robotics.

For more information, call 1.864.630.5373, email: kvasales@UL.com or visit kvausa.com.

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