



Obtain Your Personal Certification in ISO 26262

Functional safety training
for semiconductor professionals

Course overview

This 2.5-day course is designed for engineers, developers, and managers seeking to successfully apply ISO 26262 to their safety-related semiconductor programs. The training starts with an overview of *ISO 26262:2018*, followed by an in-depth discussion of all semiconductor key topics in *ISO 26262-Part 11: Guidelines on application of ISO 26262 to semiconductors*. kVA's expert instructors will describe functional safety for a wide range of semiconductor technologies and components including microcontrollers, analog and mixed-signal designs, programmable logic devices, memories and IPs. Functional safety analyses such as Dependent Failure Analysis (DFA) and Failure Modes, Effects and Diagnostic Analysis (FMEDA) are presented from a semiconductor viewpoint, including worked examples of DFA and FMEDA.

Training topics

- Introduction to ISO 26262:2018
- SEoC framework for semiconductor elements
- Semiconductor component development according to ISO 26262-Part 11
- Software development according to ISO 26262-Part 6
- Semiconductor quantitative hardware metrics

- Functional safety for semiconductor technologies
 - Digital components including microcontrollers and memories
 - Analog elements
 - Programmable logic devices
 - Intellectual property (IPs)
- Dependent failure analysis
- Semiconductor safety evaluation

Optional UL Certified Functional Safety Professional Exam

Participants who complete all 2.5-days of training are eligible to take a two-hour certification exam in the afternoon of the third day. Those who pass the exam are individually certified as a *UL Certified Functional Safety Professional in Semiconductor or UL-CFSP*.

Upon the successful completion of the *UL-CFSP exam*, participants will receive a certificate and badge that they can use to demonstrate their competence in automotive functional safety. The certification is good for three years, after which individuals may recertify.



Objectives

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

- Understand the fundamentals of functional safety: concepts, principles, standards and management across the value chain
- Understand safety goals and Automotive Safety Integrity Levels (ASIL)
- Apply ISO 26262 processes for functional safety to a wide variety of semiconductor products, including:
 - Digital components including microcontrollers and memories
 - Analog elements
 - Programmable logic devices
 - IPs
- Perform qualitative and quantitative safety analysis (techniques such as FTA, FMEA and FMEDA) throughout the development process
- Perform DFA for semiconductor products
- Evaluate quantitative hardware metrics including SPFM, LFM, and PMHF
- Define a software development process in accordance with required ASIL

Target audience

- Engineers, developers, project leaders, quality managers and testing personnel who are developing safety critical automotive semiconductors based on ISO 26262
- Leaders of organizations involved in engineering development of automotive electronic systems, hardware, software, and processes
- Semiconductor industry professionals seeking a better understanding of functional safety of automotive electronic systems and the ISO 26262 standard
- Safety and quality professionals responsible for ISO 26262 compliance

Why choose UL?

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



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