



SOFTWARE INTENSIVE SYSTEMS

Understand automotive cybersecurity

Training and certification for security
professionals in automotive

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Course overview

With the rising role of electronics in automobiles, cybersecurity has increasingly become a critical aspect of product design and development. The release of the ISO/SAE 21434 standard in August 2021 provides automotive OEMs and suppliers a set of requirements and a framework to standardize their cybersecurity efforts. This three-day course is designed to help engineers, developers, project leaders and quality managers gain a better understanding of the security processes required by ISO/SAE 21434 and their impact on the life cycle of automotive components and systems and the automotive industry. During the training, our expert instructors will walk through exercises and examples to show learners how requirements and concepts in the ISO/SAE 21434 standard are applied.

ISO/SAE 21434 training topics

- Overview, background, scope and need of ISO/SAE 21434:2021
- Cybersecurity management
 - Cybersecurity policy
 - Cybersecurity culture
 - Tailoring of cybersecurity activities
- Concept phase
 - Threat analysis and risk assessment (TARA)
 - Assigning cybersecurity goals
 - Cybersecurity concept
- Product development
 - System design
 - System integration
 - Cybersecurity validation
- Continual cybersecurity activities
 - Cybersecurity monitoring
 - Cybersecurity event evaluation
 - Vulnerability analysis and management
 - Production, operation, maintenance and decommissioning

Optional UL Certified Cybersecurity Professional exam

Participants who complete the three-day training are eligible to take a two-hour certification exam on the afternoon of the third day. Those who pass the exam are individually certified as a **UL Certified Cybersecurity Professional** in Automotive, or **UL-CCSP**.

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

Objectives

- Understand the contents and purpose of the ISO/SAE 21434 standard and have a good overview on the regulatory ecosystem regarding cybersecurity in automotive
- Have an improved awareness of cyber threats and of the necessity to include cybersecurity in all stages of product development
- Become familiar with real-life attacks in the automotive domain
- Define the state of the art in terms of security in the embedded and automotive ecosystems and the main cybersecurity concepts, e.g., assets, threats, threat agents, attacks, attack vectors, attack surface, vulnerabilities, risks, mitigations, etc.
- Gain an overview of existing threats and countermeasure methods

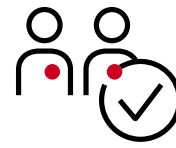
Intended audience

- Engineers of organizations involved in engineering design and development of automotive electrical and electronic systems and subsystems
- Experienced developers, project leaders, quality managers and testers who are developing secure components in automotive that will be based on the ISO/SAE 21434 standards
- Managers seeking a better understanding of the cybersecurity of automotive electronic systems and the ISO/SAE 21434 standard
- Quality and safety professionals intended to be engaged in ISO/SAE 21434 compliance



Why choose UL Solutions?

UL Solutions' global network of technical experts and state-of-the-art facilities, along with our long-standing relationships with partner laboratories and industry technical leaders, helps manufacturers gain the confidence they need to compete in a more complex global supply chain.



Knowledge you can trust

Our experienced staff will support you from the initial design stage of product development through testing and production. Our experts can assist you in understanding the certification requirements for your specific markets.



Speed and efficiency

Our cost-effective systems and state-of-the-art facilities cut through the red tape and help accelerate your time to market.



Single-source provider

UL Solutions helps you meet all of your compliance needs and, by bundling safety, performance and interoperability services, can also help save you valuable time and money.



Global reach and access

Our global network of expert engineers helps you understand the various national and global requirements for your specific market application.

Learn more at [UL.com/SIS](https://www.ul.com/SIS).



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