CEFS – Certified Expert in Functional Safety

NEW

Expert

The CEFS – Certified Expert in Functional Safety course gives you expert knowledge of functional safety of machines that you can put to immediate use.

The course provides comprehensive information about the corresponding EN ISO 13849 and EN IEC 62061 standards and a practical approach to the creation of complex safety systems. CEFS is aimed at people who already have prior knowledge in the field of functional safety.

Upon successful qualification, you will be able to create and assess safety systems yourself – from design through verification to implementation and validation. CEFS includes a series of course works in which you will learn how to apply particular topics in practice.

Your benefits at a glance

- The course provides comprehensive expert knowledge of functional safety in technical depth.
- You will learn how to successfully validate functional safety systems.
- We will show you how to select the most effective and cost-efficient control system that is ideally suited to your requirements.
- You will receive detailed information on how complex safety systems can be designed in conformity with EN ISO 13849 and EN IEC 62061.
- The the compact design of the course and content built on prior knowledge enables certification within just two days.
- After passing the test, you are issued a certificate from TÜV NORD that verifies your qualification. The certificate is recognized worldwide and entitles you to use the designation “CEFS – Certified Expert in Functional Safety”.

TÜV NORD

CEFS – Certified Expert in Functional Safety

Contents

Basic knowledge of functional safety
- Basics of safety control systems
- Application and implementation of Performance Level (PL) and Safety Integrity Level (SIL)
- Safety requirement specification
- Course work 1 “Producing a safety requirement specification”

Designing a safety control system
- Safety circuit architectures
- Preventing and controlling systematic failures
- Course work 2 “Division into subsystems”
- Course work 3 “Determining the probability of a random hardware failure”
- Course work 4 “Checking the systematic requirements, including safety-related software”

Validating a safety circuit
- Creating a validation plan and protocol
- Course work 5 “Designing a validation protocol”
- Using software tools for validation
- Course work 6 “Software-based review of the safety level”

Expert knowledge of functional safety
- Special cases
- Solution-oriented exercise “Practical application of functional safety”
- Requirements and implementation of a corporate functional safety management system

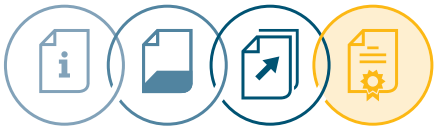
Target groups

CEFS is aimed in particular at machine manufacturers, design engineers and integrators with special responsibility with regard to safe control systems. Furthermore, CEFS is specially intended for people who are responsible for machinery safety of new and existing machines in day-to-day operations, such as:

- Design engineers
- Programmers of safe control systems
- Project engineers
- System integrators
- Test engineers who are responsible for the validation of machinery

Your best path to qualification

CEFS is at the highest level of our international qualification program, the expert level. With the relevant professional experience or participation in training courses from the previous levels, you have a structure for building your expert knowledge. Depending on your professional experience and level of knowledge, we therefore recommend completing the training courses listed on the right in order. Just jump in at the appropriate level.



Introduction: Introduction to Machinery Safety

Fundamental: Fundamentals of Machinery Safety

Advanced: Safety Design Incorporating EN ISO 13849 and EN IEC 62061

Expert: CEFS – Certified Expert in Functional Safety

Webcode: web202195

Online information at www.pilz.us