

# Development of safety related Hardware acc. to IEC 61508, EN ISO 13849-1 and IEC 62061.

## Hardware of safety-related products.

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Seminar	1 Termin verfügbar	Teilnahmebescheinigung
Präsenz / Virtual Classroom	8 Unterrichtseinheiten	Online durchführbar

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Seminarnummer: 07278

Stand: 18.06.2026. Alle aktuellen Informationen finden Sie unter <https://akademie.tuv.com/s/07278>

This seminar presents normative requirements for development of hardware in safety-related engineering. Structural requirements are discussed as well as measures for fault detection and control based on practical examples.

All aspects necessary to design safety-related hardware will be considered and discussed.

Focus is put on requirements for SIL 3 HW development according to IEC 61508 and IEC 62061 as well as EN ISO 13849-1 and their practical realization.

## Nutzen

- You will gain a thorough understanding of the standard's requirements.
- You will understand effective error control measures.

## Zielgruppe

Engineers designing and developing HW products and components. Project managers and executives responsible for product design and development.

## Voraussetzungen

Basic knowledge of the standards IEC 61508, EN ISO 13949-1.

## Inhalte des Seminars

Normative fundamentals of Functional Safety: IEC 61508, IEC 62061, EN ISO 13849-1  
Safety related structures acc. to

- IEC 61508, IEC 62061
- EN ISO 13849-1

Safety-related requirements

- normative requirements
- „good safety engineering practice“
- handling of fault exclusions

Presentation of various diagnostic techniques

- digital DC - inputs
- digital DC – semiconductor outputs
- analog inputs
- reset-circuits
- microcontroller
- power supplies

Practical Example: Role-playing „Designer goes inspector“

- self-contained assessment of a  $\mu$ C based circuitry
- common discussion of results

## Terminübersicht und Buchung

Buchen Sie Ihren Wunschtermin jetzt direkt online unter <https://akademie.tuv.com/s/07278> und profitieren Sie von diesen Vorteilen:

- Schneller Buchungsvorgang
- Persönliches Kundenkonto
- Gleichzeitige Buchung für mehrere Teilnehmer:innen

Alternativ können Sie das Bestellformular verwenden, um via Fax oder E-Mail zu bestellen.