



FS 111 | Functional Safety  
Basic knowledge

# TrainingFacts

## Introduction to Functional Safety in process industry according DIN EN IEC 61511

Practical based instruction for end users and system integrators. The one-day workshop demonstrates the implementation according the standards of functional safety. Participants learn to understand, communicate and apply Functional Safety Management and lifecycle principles. Use hazard and risk analysis, design safety-instrumented systems (SIS), calculate failure rates, select adequate equipment and understand the certificates and the relevant safety manuals.

### Course Content

#### Introduction/Basics

- Presentation of relevant standards
- What is risk and how to handle it?
- Manage safety properly

#### Analysis

- Identification of hazards and classification
- Examples using HAZOP, risk matrix and risk graph

#### Realisation

- Basics for specification
- Considerations about software design?
- Optimizing of software development
- Key elements for operation
- Checklists: a universal aid?

#### ValidationOperation

- Safety must be ensured during plant operation
- Proper (important) recording of faults
- Fault analysis
- Proof tests

FUNCTIONAL SAFETY-TRAINING  
FS 111 | FUNCTIONAL SAFETY  
BASIC KNOWLEDGE

### Dates in 2018

| Date             | Location | Country | Language |
|------------------|----------|---------|----------|
| Dates on request |          |         |          |

### Duration

1 day  
Begin: 08:30 pm  
End: 16:30 pm

### Number of participants

- Min. 4 participants
- Max. 8 participants

### Prices 2018

- 590,- € per person

### Services

- Paper copies of training documentation
- Refreshments and lunch

### Participant profile

- Operating staff (plant management, shift supervisors, plant operators, on-site personnel, etc.)
- Measurement and regulating staff
- Planning staff with no particular focus on functional safety, including:
  - Process engineering planning
  - Mechanical construction/installation
  - Operational implementation

### Tailored training

- Course also possible on-site when space and appropriate technical equipment are available (price upon request)
- Individual course focus possible for closed groups

### Further courses on this subject

- Functional Safety Engineer (TÜV Rheinland) (FS 132) – 4 days
- Use of machinery in the process industry (FS 121) – 1 day

### Registration and Contact

General terms and conditions as well as registration at <https://www.hima.com/en/products-services/seminars/> or using our registration form.

For any other questions please contact:

E-Mail: [training@hima.com](mailto:training@hima.com)

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