

TÜV Functional Safety Technician (SIS) (certified)

Objectives: The objective is to provide operators, maintenance technicians and all those who are involved in the maintenance and operation of Safety Instrumented Systems with elementary and necessary knowledge about functional safety, based on the international standards IEC 61508: edition 2010 and IEC 61511 edition 2016.

Who should attend?: This course is ideally suited for maintenance- and instrument engineers or operators whom will be involved in testing, maintaining and decommissioning of Safety Instrumented Systems (cradle to grave).

Prerequisite knowledge: In accordance with TÜV Rheinland Functional Safety Program. A minimum of 2 years' experience in the field of functional safety. A Technical Diploma or Certificate or equivalent engineer level responsibilities status as certified by the employer.

Programme:

Day 1:

- Module 1: General introduction
- Module 2: Standards 61508 and 61511
- Module 3: Installation & Commissioning
- Module 4: General aspect for all phases

Day 2:

- Module 5: Overall Safety Validation
- Module 6: Operational phase
- Module 7: Maintenance and Repair
- Module 8: Proof testing
- Module 9: Modifications
- Module 10: Decommissioning and Disposal

Day 3:

- Examination



Examination: At the end of the course participant has to take an exam. The examination contains two parts. Part one consist 40 multiple choice questions and part two consist ten open questions.

Methods of delivery: Interactive lecture. Exercises (both group and individual exercises).

Trainer(s): Safety Assurance and Consultancy group of Yokogawa Europe.

Duration: 2,5 days

Number of Participants: 6 to 12 participants



TÜV Functional Safety Engineer (SIS) (certified)

Objectives: The objective is to provide participants with elementary and necessary knowledge about functional safety based on international standards IEC 61508 and IEC 61511.

Who should attend? Instrument Engineers, Application Engineers, Site Engineers, Project Managers, Operation Engineers, Maintenance Engineers and all those who are involved in the design, realization, maintenance and operation of safety systems.

Prerequisite knowledge: A minimum of 3 years experience in the field of functional safety, Bachelor degree as a minimum or equivalent engineer level and responsibilities status as certified by the employer.

Programme

Day 1:

- General introduction
- Module 1: Introduction to Functional Safety
- Module 2: International safety standards IEC 61508 and IEC 61511
- Module 3: HAZOP – SIF – SIL

Day 2:

- Module 4: Safety Engineering
- Module 5: Functional Safety Management
- Module 6: Failures and hardware fault tolerance

Day 3:

- Module 7: Common cause influences and other failure types
- Module 8: Safety calculations
- Session for asking questions

Day 4 (morning):

- Examination

Examination

At the end of the course participant has to take an exam. The examination consists of 60 multiple choice questions and 7 cases. Pass score is 75%. Those who pass will receive from TÜV Rheinland the certificate TÜV FS Engineer.

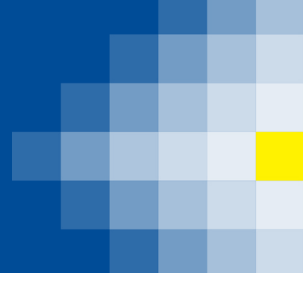
Methods of delivery Interactive lecture Exercises (both group exercises and individual exercises)

Trainer(s): Safety Assurance and Consultancy group of Yokogawa Europe

Duration: 3.5 days

Number of participants: 6-12 participants





Functional Safety for End-users

Objectives: The objective is to provide participants with elementary and necessary knowledge about functional safety based on international standards IEC 61508 and IEC 61511.

Who should attend? Architectural and/or Basic Designers, Lead Engineers, Project Engineers, System Engineers, Application Engineers, Site Engineers and Project Managers involved in safety projects.

Prerequisite knowledge: Participants should have an affinity with industrial safety.

Programme

Day 1:

- General introduction
- Module 1: Introduction to Functional Safety
- Module 2: International safety standards IEC 61508 and IEC 61511
- Module 3: HAZOP – SIF – SIL
- Module 4: Safety Engineering

Day 2:

- Module 5: Functional Safety Management
- Module 6: Failures and hardware fault tolerance
- Module 7: Common cause influences and other failure types
- Module 8: Safety calculations

Methods of delivery: Interactive lecture
Exercises (both group exercises and individual exercises)

Trainer(s): Safety Assurance and Consultancy group of Yokogawa Europe

Duration: 2 days

Number of participants: 6-12 participants



Introduction to Safety Systems Training

Objectives: To give the participant an understanding of the role played by Safety Systems for industrial production processes in preventing personal injury, environmental damage, damage to equipment and loss of production. The course will cover the terminology used for safety systems, the international standards IEC 61508 and IEC 61511 which cover all safety life-cycle activities and also the safety solutions offered by the Yokogawa ProSafe Systems family.

Who should attend? Operators, engineers etc, interested in the various aspects of safety systems for industrial production processes.

Prerequisite knowledge: None.

Programme

Day 1:

- Welcome and course introduction
- Usage of safety systems
- Safety systems terminology
- International standard, IEC 61508 and IEC 61511
- Introduction to Yokogawa ProSafe Systems
- Evaluation

Duration: 1 day

