



# SAFETY MGMT. SYSTEMS: FUNCTIONAL SAFETY MANAGEMENT SYSTEM (FSMS) CERTIFICATION

## COURSE OVERVIEW

**Course Number:** SMS-0001

**Course Duration:** 5 Days (Includes TÜV FS Exam)

**Prerequisite Course (s):** None

Currently, many companies are heavily involved with the implementation of the emerging international safety standards IEC 61508, IEC61511 and ISA 84.01.

In a summary, the following aspects need to be considered to comply with IEC 61508:

- What are the potential hazardous events and their associated risks and what risk reduction is required to achieve an acceptable safe process installation?
- How can it be established and confirmed that the chosen safeguarding measures/equipment realize the required risk reduction e.g., realize a specific safety integrity level (SIL)?
- What activities need to be carried out to guarantee that this safety integrity level is maintained during the entire lifetime of the safeguarded process installation? IEC 61508 has specified detailed requirements on the application of electric/electronic/programmable electronic safety related systems (E/E/PE-SRS).
- What documentation needs to be generated and controlled while the safety life cycle process is being executed?

## COURSE DELIVERY OPTIONS

- Instructor-Led Training (ILT)
- Virtual Instructor-Led Training (VILT)

## COURSE OBJECTIVES

- Hazard and risk assessment methodologies
- Safety Requirements Specification / SIL Selection
- SIS design concepts
- Reliability Analysis techniques, FTA, RBD, FMEA, Markov
- SIS validation techniques
- SIS operation, maintenance, and testing
- SIS-related Process Safety Management
- Safety Lifecycle Management
- Safety verification, validation, audits, and assessments
- Introduction to ISA 84.01 and IEC 61511

## CERTIFICATION

On the final day, the participants will take the certification exam. If passed, they will receive **Functional Safety Engineer Certificate** from TÜV Rheinland.