# Safety Lead Competency Centre One Day IEC 61511 Functional Safety Appreciation and Awareness Training Course

The goal of this course is to provide an End User/EPC perspective of the key management, design and operational requirements of Functional Safety according to IEC 61508 / IEC 61511. This includes the key steps to compliance in the context of Safety Instrumented Systems (SIS) projects.



# Learning objectives

Upon completion of this course, the participants will be able to:

- Describe the principles of Functional Safety and key features of IEC 61508 / IEC 61511
- Describe the requirements of the Safety Lifecycle
- Appreciate the methods available to determine Safety Integrity Levels (SIL)
- Appreciate the need for Safety Lifecycle processes, procedures, methods and techniques
- Understand the key factors used in the SIS engineering and design such as Random Hardware Failure, Architectural Constraints and Systematic Capability
- Requirements for operations, maintenance & modification

#### Participant profile

This training is targeted to Asset Owner/End User and Engineering Contractors/EPC stakeholder managers, project engineers, process engineers, safety engineers, operations managers, electrical, control, instrumentation, maintenance and application engineers who require a general introduction and awareness to the functional safety standards and the key requirements for compliance.

The course is particularly useful for those managers and engineers who may be directly or indirectly; involved in executing safety instrumented system projects covering any phase of the safety lifecycle from hazard and risk assessment, through engineering and design to operations and maintenance.



#### Agenda

Background to the Standards

Key Concepts and Safety Lifecycle

Hazard & Risk Assessment & SIL Determination Methods

SIS Design and Development

Overview on the selection of components, subsystems

Operations, maintenance and modifications

Continuous review and improvement

#### Course type and methods

This is an instructor led course with classroom discussions regarding the implementation of IEC 61511 and the relationship to safety instrumented systems (SIS).

## Course duration

The duration is 1 day.

#### Course language

This training course is available in the following languages:-

- English
- German
- Spanish
- Chinese

Language selection can be agreed as required.

#### **Course Certificate**

On successful attendance at this course, a certificate will be issued and approved by the ABB Safety Lead Competency Centre.



#### How to order

Please contact any of the ABB colleagues listed below for either attendance at any Open course being planned in your region or if you would like to run a training course specific to your organisation.

On completion of discussions, a fixed price training proposal will be issued to you for your approval to proceed and the training delivered in your choice of course language

# Global

John Walkington St Neots, UK john.walkington@gb.abb.com

## **EMEA**

Bernd Krause Frankfurt, Germany bernd.krause@de.abb.com

## **Americas**

Edgar Ramirez Calgary, Canada edgar.c.ramirez@ca.abb.com

# **Asia Pacific**

WeiFeng Cao Shanghai, China weifeng.cao@cn.abb.com