Formation RN1

Functional safety according to IEC 61508

Multisectoral vision

Duration 1 day

Objectives

The objectives of the training are to provide to the participants an overview of the applicable standards, methods and tools to develop safe operating products related to electrical, electronic or electronics programmable systems.

This standard represents the awareness of RAMS engineering required by any company wishing to intervene in the field of security systems.

Program

The different standards are presented:

- IEC 61508 in the field of electrical, electronic and programmable electronics systems
- DO 178 (Embedded software), DO 254 (material), et DO 278 (ground software) for aeronautical
- IEC 61511 for industrial process,
- IEC 61513 for the nuclear domain
- ISO 13849 for safety of machinery
- ISO 26262 for the automotive industry

Presentation of IEC 61508 standard

- Concept of safety life cycle
- Concept of « prescription »
- Safety activities
- Analyze the safety of a system
- Impact of the safety life-cycle in the development cycle of a system
- Example of implementation.

Analysis of SIL notions

- Introduction of the notion of requirement
- Concept of « Safety Case»
- Presentation of the “GAME” theory

Presentation of the standards and the safety level in the different fields

- Aeronautical
  - Study the concept of « level » (DAL) and the suggestions
- Nuclear
  - Study the concept of « class de I&C system» and the « category of function I&C » according to IEC 61513 and IEC 61226
  - Presentation of the deterministic approach
- Industrial machinery
  - Study the concept of « performance level » (PL) and « architectural categories »
- Automotive
  - Study the concept of « safety goal », « safety concept » and ASIL level

Teaching methods

Presentations with illustrated practical case
Lunch meeting with the speaker

Prerequisites

Equivalent profile as engineer, in technical or in scientific education

For who

Project Managers, Design Offices, Methods, R & D, Quality

Lecturer/Trainer

Expert and / or specialist

Assessment methods

Assessment sheet and self-assessment given at the end of training

Sites

PARIS / LYON / MONTREAL

Intra-company sessions on request

Contact us

For more information
Phone : 438-558-1395
formation@sector-group.net

Regulatory and normative references, applications