

F.S. ENG. NEW UPDATE OF SIS IEC 61511:2016, ED. 2 KEY CHANGES & IMPACT FOR THE PROCESS INDUSTRY

(FUNCTIONAL SAFETY ENGINEERING) - SAFETY INSTRUMENTED SYSTEMS
ENGINEERS OR FUNCTIONAL SAFETY QUALIFIED PROFESSIONALS



PROFESSIONAL DEVELOPMENT:

One classroom day providing ACM Facility Safety attendance diploma to use as indication of current up to date knowledge concerning Functional Safety standard for Safety Instrumented Systems, IEC 61511:2016, Ed. 2



BENEFITS OF THE IEC 61511:2016, ED.2 UPDATE COURSE:

This training course will provide participants with the ability to understand the implications and changes to the IEC 61511 international standard.

Offers F.S. Engineers, maintenance personnel, operations, and supervisors the important information in the new standard IEC 61511:2016, Ed. 2; thereby increasing their expertise.

It will also provide engineers dealing with Management of Change the ability to speak the same language as the operators of the facilities.



COURSE OVERVIEW:

The informative one day session is designed to summarize and highlight the changes within Edition 2 of IEC 61511:2016. The session offers F.S. Engineers, or industry practitioners, who additionally possess significant work experience in the field of functional safety, the ability to keep updated with the new standard IEC 61511:2016, Ed. 2 increasing their expertise.

Modifications to IEC 61511, 2nd edition, include:

- Digital (cyber) security
- Regular functional safety audits (FSA)
- Competency requirements
- Requirements for safety requirement specifications (SRS)
- Process safety time (PST)
- Specific requirements added for managing a SIF
- More emphasis that failure rates used during the reliability calculations
- Systematic and random failures
- Safety Manuals



PREREQUISITES OR RELATED COURSES:

In accordance with the TÜV (Rheinland) Functional Safety Program guidelines, it would be recommended that persons registering for this informative session have a background in the use of the previous IEC 61511 standard: For example, it would be advantageous to possess:

- A SIS F.S. Eng. Certificate from TÜV (Rheinland) Functional Safety Program, or
- A minimum of 3 to 5 years' experience in the field of functional safety, and
- University degree or equivalent engineer level responsibilities status as certified by employer

Note: Participants who meet these requirements without a professional engineer designation (i.e. Technologists) will also be given the attendance diploma as further proof of their qualifications in the field of functional safety.



WHO SHOULD ATTEND?

This session is well suited to engineers and technologists who aim to follow the best engineering practices with regard to the application of Safety Instrumented Systems in the process industry, including:

- Risk professionals responsible for establishing corporate tolerable risk targets
- Managers / Team Leaders responsible for determining SIS design standards
- Engineers and technicians responsible for ensuring that SIS have been designed to appropriately mitigate the level of risk identified
- Project Managers who need to understand the concepts and principles of IEC 61508 & 61511
- Engineers involved in any aspect of the SIS Safety Lifecycle
- Original Equipment Manufacturers, OEMs, such as manufacturers for Boilers, Compressors, Furnaces, Burner systems, Flare systems, etc.



COURSE OUTLINE:

The session main scope is as follows:

DAY 1

OVERVIEW

Overview of International Electro technical Commission, IEC.

Introduction and overview of the Safety Instrumented Systems Standard IEC 61511

Differences between the 1st and 2nd editions of IEC 61511

MAIN TOPICS

SIF mode of operation

New requirements for Functional Safety Management, FSM

New requirements for Functional Safety Assessments, FSA

More detailed requirements for SIS verification activities

New requirements for security risk assessment

New BPCS considerations

Additional requirements for SIF bypasses

New documentation requirement the “Safety Manual”

New requirements for hardware fault tolerance, HFT. (SFF)

Requirements for better substantiation of the failure rate data

“Prior Use” defined and new requirements – Systematic integrity – “Proven in Use”

Proof testing of SIF clarified

New requirements for systematic capability, SC, systematic integrity

New requirements for formal procedures to manage competence

Other generic topics



THE ACM EXPERIENCE:

Our courses and workshops are experiential, interactive and provide participant's with practical knowledge and tools that can be immediately applied back at work.



COURSE TESTIMONIALS:

Here are a few quotes from over 3,300 participants we've trained;

- *“The instructor was very interactive, encouraged discussion and welcomed feedback.”*
Process Engineer
- *“Great course content, coverage and length. Superb instructor who presented material as it applies to real world scenarios.”*
I&C Engineer
- *“Displayed depth of knowledge and experience. Showed passion for the functional safety process.”*
VP Engineering
- *“I learned a lot in this course, especially with real industry examples that the instructor explained based on his depth of knowledge and experience.”*
Process Engineer
- *“The instructor is very knowledgeable and is always willing to teach and give guidance. The way the instructor taught the course made understanding IEC 61511 standard much easier.”*
Inspection Analyst Engineer
- *“Really knowledgeable on the matter, great analogy. Willing to go beyond course material.”*
Automation Engineer
- *“Excellent throughout, lots of practical experience and enthusiasm related to subject. Pleasure to work with. Looking forward to working with ACM on projects and training programs in the future.”*
P.Eng. President



COURSE INSTRUCTORS



Guillermo Pacanins

B.Sc. Elec. Eng., P. Eng., TÜV (Rheinland) F.S. Senior Expert / Instructor

Mr. Guillermo Pacanins is an Electrical Engineer with over 27 years of experience with knowledge in Process Controls and Functional Safety in the process industry. He has taught several courses in Process Automation to some of the largest companies in the world. With Mr. Guillermo's excellent communication and leadership skills, combined with his in-depth understanding of Process Safety Engineering makes him a successful functional safety analyst/educator.

Guillermo is a TÜV Functional Safety Senior Expert and teaches several functional safety workshops globally for ACM. Also, Guillermo has a Process Safety Practice Certificate from Texas A&M University, Mary Kay O'Connor Center for Process Safety.

[View instructor profiles online.](#)

CONTACT FOR FURTHER INFORMATION: info@acm.ca

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