

INTRO TO SIS / SIL FOR OPERATIONS & MAINTENANCE TECHNICIANS



PROFESSIONAL DEVELOPMENT:

Two classroom days providing 1.6 CEU (Continuing Education Units) or 16 PDH (Professional Development Hours)



BENEFITS OF THE INTRO TO SIS / SIL FOR OPERATIONS & MAINTENANCE COURSE:

- What is a Safety Instrumented System and what do we use it for?
- Why do we have a SIS?
- How do we use and maintain an SIS?
- SIS/SIL for Operations & Maintenance



COURSE OVERVIEW:

This 2-day workshop will give Operations and Maintenance personnel an understanding of “Functional Safety”, and the relationship of Safety Instrumented System (SIS) with respect to process and operational related hazards. The course introduces the concepts and definitions related to Process Hazards, Risk Analysis, Safety Instrumented Systems, and Functional Safety Management. It will provide details on maintaining Safety Instrumented Systems and Safety Instrumented Functions in accordance with latest IEC 61511:2016 standards and encapsulate the concepts of Safety Integrity Level with a hands-on workshop on the afternoon of day 2.

The course starts by giving important information on how to capture and present risk at your facility, using best practice in industry, then addresses, using the results of your Process Hazard Analyses, SIL Determination (LOPA), as well as SIL Verification methodologies, and ends by looking at ways of managing risk in real time during operations and maintenance.

From a good P&ID to a great contingency safety plan for operations and maintenance, many people are involved in this process and it's important to understand where the information is transferred and how each phase of the project relates to the next until it arrives with Operations and Maintenance, all being managed with the use of dedicated safety best practices methods and tools. The data collected in the initial stages of your new or existing project will ultimately have an impact on how your operators run the plant, so it is important to know how to ensure nothing is missed or forgotten, so you can prevent hazardous scenarios from occurring.

This course is not just for the experts but is a valuable overview for anyone involved in hazard prevention and risk management at any level. No knowledge of the IEC 61511 guidelines or other standards is required to participate. Past course participants have ranged from Vice Presidents to Project Managers and Engineers.



PREREQUISITES OR RELATED COURSES:

There are no prerequisites for this course. However, this course is an ideal prerequisite for Operations and Maintenance personnel to show Leadership in process safety.



WHO SHOULD ATTEND?

Anyone who works in close proximity to hazardous processes such as Operations and Maintenance Personnel, Supervisors, Engineers and Safety Professionals who require a sound understanding of risk and risk management.

- Maintenance Personnel
- Field and control room operators
- Instrument and Electrical technicians
- Technicians involved in the commissioning, testing, operation, maintenance support, modification and change management of Safety Instrumented System for process plant applications



COURSE OUTLINE:

DAY 1	DAY 2
Part 1 – Why are we here today?	Part 8 - What engineering processes are needed to conform to IEC61511?
Part 2 – SIL Determination, Layers of Protection Analysis (LOPA)	Part 9 - What operations processes (e.g. MOC/Impairment) are needed?
Part 3 – What are SIL / SIS?	Part 10 - How is the system audited?
Part 4 – Review of Company specific SIF's (including P&ID's)	Part 11 - Installation and Commissioning
Part 5 - How do we go about changing the SIS?	Part 12 – Operations and Maintenance
Part 6 - Why do we need to proof test and what is required?	Part 13 – Workshop
Part 7 - What records are needed for change, testing, etc.?	



THE ACM EXPERIENCE:

Our courses and workshops are experiential, interactive and provide participants 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;

- *"Very helpful instruction and activities in this course helped me get what I was looking for from it!"*
Project Coordinator
- *"The instructor was very interactive, encouraged discussion and welcomed feedback."*
Process Engineer
- *"Great course! The instructor made the course very enjoyable. With their wealth of knowledge and experience they could answer all of the questions, as well as provide a real life situation in which it applied."*
New Grad EIT
- *"Great course content, coverage and length. Superb instructor who presented material as it applies to real world scenarios."*
I&C Engineer



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

CALL TOLL FREE AT 1-877-264-9637

PRIVATE IN HOUSE TRAINING COURSES:

<http://www.acm.ca/institute-of-hazard-prevention/private-courses>

