



PROFESSIONAL DEVELOPMENT:

Two classroom days providing 1.2 CEU (Continuing Education Units) or 12 PDH (Professional Development Hours)



BENEFITS OF THE FUNDAMENTALS OF THE SAFETY LIFECYCLE COURSE:

- Experience the Safety Lifecycle, starting from the conceptual phase of a project right through to operations
- Learn how to capture and present risk at your facility
- Find out what happens with all your PHA or Risk Assessment Data
- Find out how operations and maintenance people know how to manage risk on a daily basis
- Find out how to ensure nothing is missed or forgotten, so you can prevent hazardous scenarios from occurring



COURSE OVERVIEW:

Over this 2-day course, participants will experience the Safety Lifecycle, starting from the conceptual phase of a project right through to operations. The course starts with a solid understanding of how to capture and present risk at your facility using software, then addresses using the results of your Process Hazard Analyses, SIL Determination (LOPA), as well as SIL Verification information, 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, 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, all being managed with the use of dedicated software 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, and 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 PHA/HAZOP Leadership.



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.
- Engineers involved in facility design and construction will especially benefit from this course.



COURSE OUTLINE:

DAY 1		DAY 2	
PHASE 1 - FRONT END DESIGN		PHASE 3 - IMPLEMENTATION	
Process Hazard Analysis		Safety Integrity Level Verification/Validation	
PHA Documentation		SafeGuard Profiler: SIL-V Module	
PHA Analytics			
PHASE 2 - DETAILED DESIGN		PHASE 4 - CONTINUING OPERATION	
Layer of Protection Analysis, LOPA (SIL Determination, Contingency Planning, Safety Requirement Specifications)		Operations	
SafeGuard Profiler: SIL-D Module		SafeGuard Sentinel – Real Time Risk Exposure	



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:



Malcolm Harrison

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

Mr. Harrison is a P.Eng. with over 40 years' experience in Instrumentation and Controls. Malcolm spent over 35 years with Shell and has diversified upstream and downstream experience in the heavy oil, offshore, refining, chemicals and oil & gas processing sectors. He is an experienced SIL Determination and CHAZOP facilitator and has worked on billion dollar projects ensuring horizontal I & C alignment between multiple EPCMs. Malcolm is a TÜV Functional Safety Expert and leads training workshops globally for ACM.



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>

