

Safe Automation in the Process Industry

3-Day Course

Program Content:

Safe Automation in the Process industry is a three-day course designed to orient attendees to the principles of safe automation, including the practices and terminology used in the design and implementation of instrumented safeguards. Experienced personnel can also benefit from awareness of more recent developments in safe automation terminology, updated standards, and techniques on sharing these concepts with newer employees.

This course will introduce the key concepts and practices necessary to design and implement safe automation, including the following topics:

- Safe automation lifecycle process
- Safe automation fundamentals, including application program, HMI, procedure and personnel systems
- Instrument justification and alarm management
- Designing automation for functional safety
- Control and safety system hardware selection (e.g., instrumentation, logic solvers, auxiliaries)
- Controlling systematic error in automation systems, including designing for security
- Safe automation metrics

The course participants will gain an understanding of the following:

- Relationship between inherently safer design and functional safety
- How automation network design impacts cybersecurity of the systems.
- How safe automation is included in the standard project work process
- Selecting automation devices that are fit for purpose and reliable.
- How operating objectives and inherently safer design principles are incorporated into reliable automation design.
- Establishing metrics for automation performances
- Key instrumented safeguard management practices, including bypass management, change management, maintenance planning, automation organization planning, auditing, etc.
- Fundamentals of safety function specification.
- Essentials of alarm management, including instrument and alarm justification

Who Should Attend?

Process engineering, process automation, and process safety personnel

2.1
CEUs

21
PDHs