Duration: 2 Day
Time: 8:00 am – 4:00 pm UTC -4
Date: See online store
Location: Microsoft Teams
Cost: $1,600 USD / Student

Fundamentals Training

FSE101: Introduction to Layer of Protection Analysis

Course Outline

This course will cover will focus on how to correctly apply LOPA to quantify risk, determine required protection layers and assign Safety Integrity Levels. Topics covered will include:

- Risk Concepts
- Tolerable Risk Criteria / Risk Matrix Calibration
- Semi-qualitative LOPA method
- Semi-quantitative LOPA method
- Summing or non-summing of causes
- Consequence Selection
- Secondary Hazards
- Initiating Event – types / frequencies
- Independent Protection Layers and Mechanical Integrity requirements
- Safety Instrumented Functions
- How many BPCS Credits in LOPA?
- Common Pitfalls and Best Practices
  - Overpressure Guidance
  - Consequence Event Tree
  - Unit Operation Templates
- Writing "good" recommendations
- Evergreen PHA / LOPA

All students will get **hands on experience** in completing LOPA on a variety of scenarios.

Instructor – Mike Scott – PE, CFSE

CEO of aeShield which has developed a patented digital process / functional safety lifecycle enterprise software offering deployed in 283+ facilities across 42 countries. He has over 30 years of process / functional safety and I&C experience including risk analysis, safety instrumented systems and control systems engineering, where he performed / implemented conceptual design, detailed design, configuration, and startup / commissioning exercises for the process industry.

· Co-Chairman of the ISA S84 Committee
· IEC 61511 committee member
· Granted 7 patents on safety lifecycle tools and implementation
· ISA Fellow