

## Safety Integrity Level (SIL) Training

Course 105/125



### Course Description

Safety Integrity Level (SIL) is a measure of probability to fail on demand (PFD) of the Safety Instrumented System (SIS). SIL is statistical representation of the integrity of the SIS when a process demand occurs. A demand occurs whenever the process reaches the trip condition and causes the SIS to take action.

This course covers the principles around the integrity of the safety-instrumented systems. It also teaches the users the applicability of SIL. There are in depth discussions on SIL targets as per IEC 61511 & ANSI/ISA-S84.01. SIL is used in both ANSI/ISA-S84.01 and IEC 61511 to measure the reliability of SIS. The course could include the incorporation of SIL into your facility/company risk assessment program.

SIL determination methodologies such as Consequence Method, Risk Graph, Layered Risk Matrix, Layer of Protection Analysis (LOPA) and Fault Tree Analysis (FTA) are covered.

Course instructors are industry experts from the fields of risk management and assessment, chemical engineering, engineering design and development, and projects execution.

### Course Objective

Participants will learn how to conduct a SIL study the specific requirements of the guidelines laid by ANSI/ISA-S84.01 and IEC 61511, including SIL verification and validation. Also, the participants are provided hands on experience using PHA-Pro software for its SIL capabilities.

### Benefits

This course will be beneficial to you and your organization for the following reasons:

- ❖ Participants gain the ability to conduct SIL studies effectively
- ❖ The course enhances easy learning, comprehension and success through a step-by-step approach
- ❖ Interactive learning and real-world examples are used throughout
- ❖ Course features interactive workshops

### Who Should Attend?

A wide variety of professionals and organizations will benefit from taking the SIL Methodology training course:

- ❖ Health and Safety Professionals
- ❖ Supervisors and managers responsible for safety instrumented systems

# 105

## Safety Integrity Level (SIL) Training

Course 105/125



- ✧ Control Engineers
- ✧ Project Managers
- ✧ Process Engineers

*Note:*

*Previous PHA/HAZOP experience and/or training is a recommended pre-requisite for participants who take this course.*

*Course 105 can be taken in conjunction with Course 106*

### Course Length

2 - 4 days (dependent on course material)