



Health, Safety and Environment

## SIL Determination and Verification

## Course Introduction

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- **SIL certification**

SIL certification identifies all process hazards, estimates the risk of failure and determines that if a failure occurs; that the product will “fail safely.” Every component in an instrument must be examined and verified in respect to these criteria in order to comply with the SIL restrictions

## Target Audience

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- HSE managers
- HAZOP leaders
- Instrumentation engineers
- Process operations/Engineers
- Maintenance and testing engineers

## Learning Objectives

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- Identify Safety Instrumented Systems (SIS)
- Identify what is meant by SIL
- Determine SIL Level
- Develop and implement different SIL selection techniques within your organization, including the risk matrix, risk graph, and LOPA (Layer Of Protection Analysis).
- Verify that the selected SIL is correct

# Course Outline

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- **DAY 01**

## **Hazard and risk assessment methodologies**

- HAZOP Studies, HAZOP, combined SIL / HAZOP
- LOPA (Level of Protection Analysis).
- Safety Requirements Specification / SIL Selection

- **Day 02**

## **SIL Determination (Qualitative and Quantitative Methods)**

- SIS design concepts
- Reliability Analysis techniques, FTA, FMEA,

- **Day 03**

## **SIS validation techniques**

- SIS operation, maintenance and testing

- **Day 04**

## **SIS-related Process Safety Management**

- Safety Lifecycle Management

- **Day 05**

## **Safety verification, validation, audits and assessments**

- Introduction to ISA 84.01 and IEC 61511

# Confirmed Sessions

FROM	TO	DURATION	FEEs	LOCATION
April 7, 2025	April 11, 2025	5 days	4950.00 \$	Singapore - Singapore
July 7, 2025	July 11, 2025	5 days	2150.00 \$	Virtual - Online
Oct. 6, 2025	Oct. 10, 2025	5 days	4250.00 \$	UAE - Dubai