

# Advanced Process HAZOP courses

## Venue Information

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**Venue:** London UK

**Place:**

**Start Date:** 2025-07-14

**End Date:** 2025-07-18

## Course Details

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**Net Fee:** £4750.00

**Duration:** 1 week

**Category ID:** STC

**Course Code:** STC-2

## Syllabus

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### courses Syllabus

#### Introduction

It is universally recognised that for any Company to succeed it must take a proactive approach to risk management. Over the last few years Companies and a number of Countries legislators have been focusing on Process Safety as a method to reduce the risks posed by hazardous industries. Process Hazard Analysis (PHA) is recognised as being a critical tool in the implementation of a successful risk management system.

As Hazard and Operability (HAZOP) studies are now recognised world-wide as being the qualitative risk assessment methodology of choice in the Process Industries, there will be additional focus on this specific aspect of Process Hazard Analysis.

#### In this training course , the delegates will learn:

- How to apply advanced risk assessment techniques

- HAZOP team leadership

## **Objectives**

- Understand the concepts of Risk Assessment and Risk Management
- Understand the estimation and evaluation of risks – Qualitative, Semi-Quantitative and Quantified Risks
- Techniques for Hazard Identification and Analysis – Check-Lists, Risk Profiling, HAZOP, FMEA and Task-Based Risk Assessment
- Cause-Consequences Analysis – The Role of Fault Trees and Event Trees in Accident Prevention
- Understand HAZOP studies their benefits and their short comings
- Understand the requirements of a Team Leader or Facilitator, scribe and team members during HAZOP studies
- Be able to facilitate a HAZOP study

## **The courses Contents**

### **Day One**

#### **Introduction to Risk Assessment**

- The concepts of hazards, risk and risk assessment
- Methods for risk evaluation
- Integrating risk assessment within Risk Management
- Qualitative, Semi-Quantitative and Quantitative Risk Assessment methodologies

### **Day Two**

#### **Risk Assessment Techniques: HAZOP**

- Introduction to hazards identification and analysis techniques
- Techniques for hazard identification and analysis – HAZOP
- Where and when to use HAZOP and the requirements for a successful HAZOP study
- Team composition for HAZOP studies
- Guide words and process variables used for HAZOP studies
- Syndicate exercise – application of HAZOP to relevant processes

### **Day Three**

#### **HAZOP Leadership Techniques**

- HAZOP team leader/facilitator requirements
- HAZOP scribe requirements
- Facilitating HAZOP studies, do's and don'ts

## **Day Four**

### **Consequence Analysis**

- Theory behind fire, explosion and toxic dispersion modelling utilised in Quantitative Risk Assessments
- Types of fires and their effects on people and equipment
- Types of explosions and their effects on people and equipment
- Review of software available for consequence calculations

## **Day Five**

### **The Role of QRA**

- Introduction to Quantified Risk Assessment "QRA"
- The role of Event Tree Analysis in scenario development
- The role of Fault Tree Analysis for multi-causation analysis
- Applications for ETA and FTA
- Failure data for use in QRA's
- Societal Risk and Individual Risk
- Review of software available for Quantitative Risk Assessments
- Programme review and the way ahead