



*Training Course:  
Advanced Hazard and Operability (HAZOP)  
Process*

*2 - 6 September 2024  
Liverpool (UK)*

## Training Course: Advanced Hazard and Operability (HAZOP) Process

Training Course code: HE7018 From: 2 - 6 September 2024 Venue: Liverpool (UK) - Training Course Fees: 5775 € Euro

### Introduction

Everybody agrees that a proactive approach to risk management is essential for any business to flourish. Process safety has received a lot of attention from businesses and policymakers in recent years as a way to lessen the dangers posed by dangerous industries. It is well acknowledged that Process Hazard Analysis PHA is a key element in the implementation of an effective risk management system.

There will be more emphasis on this particular component of Process Hazard Analysis because Hazard and Operability HAZOP studies are now widely acknowledged as the qualitative risk assessment methodology of choice in the Process Industries.

In this program the delegates will learn:

- How to apply advanced risk assessment techniques
- Mechanics of dispersion, fire, explosion, and toxic releases
- The concept of Quantified Risk Assessment [QRA]
- Hazard and Operability HAZOP study methodology
- HAZOP team leadership

### Course Objectives of Advanced Hazard and Operability HAZOP Process

Delegates attending this program will:

- 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 shortcomings
- Understand the requirements of a Team Leader or Facilitator, scribe, and team members during HAZOP studies
- Be able to facilitate a HAZOP study

### Training Methodology of Advanced Hazard and Operability HAZOP Process

well as looking at case studies and real-life situations.

### Organizational Impact of Advanced Hazard and Operability HAZOP Process

In addition to the professional development of staff, the organization should be able to prioritize resources to demonstrate that process risks are adequately controlled

### Personal Impact of Advanced Hazard and Operability HAZOP Process

Attendees will be able to apply skills learned from this training at a practical level to identify sources of major hazards and prioritize decisions for their control

## Course Outlines of Advanced Hazard and Operability HAZOP Process

### DAY 1

#### Introduction to Risk Assessment

- Course introduction: delegate and tutor introductions; course objectives
- 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
- Feedback and review of Day 1

### DAY 2

#### Hazop Leadership Techniques

- HAZOP team leader/facilitator requirements
- HAZOP scribe requirements
- Facilitating HAZOP studies, do's and don'ts
- Information required to allow successful HAZOP studies
- A case study where each delegate has the opportunity to facilitate a HAZOP meeting
- Review of commercial software used for HAZOP and Management of Change (MOC)
- Report back and review Day 2

### DAY 3

#### 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
- Report back and review Day 3

### DAY 4

#### Consequence Analysis

- The theory behind the fire, explosion, and toxic dispersion modeling utilized 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
- Report back and review Day 4

## DAY 5

### 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
- Report back on day 5 and discussion
- Programme review and the way ahead

## Registration form on the Training Course: Advanced Hazard and Operability (HAZOP) Process

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
 Personal E-Mail: .....  
 Official E-Mail: .....

### Company Information

Company Name: .....  
 Address: .....  
 City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
 Personal E-Mail: .....  
 Official E-Mail: .....

### Payment Method

- Please find enclosed a cheque made payable to Global Horizon
- Please invoice me
- Please invoice my company

### Easy Ways To Register

Telephone:  
+201095004484 to  
provisionally reserve your  
place.

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registration  
form to: +20233379764

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info@gh4t.com  
or training@gh4t.com

Complete & return the  
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