



*Training Course:  
Advanced Process Risk Assessment & Risk  
Management*

*2 - 6 March 2025  
Amman (Jordan)  
Chemistry*

## Training Course: Advanced Process Risk Assessment & Risk Management

Training Course code: HE7028 From: 2 - 6 March 2025 Venue: Amman (Jordan) - Chemistry Training Course Fees: 3875 € Euro

### Introduction

Health, safety, and environmental management systems rely on proactive incident prevention and reactive performance monitoring. Risk assessments are essential for actions affecting safety, production, assets, the environment, or reputation. This seminar will teach advanced risk assessment techniques, balancing risk and cost, fostering safety culture, understanding Quantified Risk Assessment, and applying root-cause analysis to investigate incidents.

### Objectives

- Recognize the difference between hazard, risk, and risk assessment
- Learn how to evaluate different types of risk
- Develop the skills of applying advanced risk assessment techniques relevant to the process industry
- Develop a strategy for planning and implementing risk reduction action plans
- Appreciate the contribution of human error to accidents
- Be able to apply advanced techniques for root-cause analysis for incidents

### Methodology

Participants will learn by active participation during the program through the use of exercises, syndicate and group discussions, training videos, and discussions on relevant types of accidents and "real-life" issues in their organizations.

### Summary

The curriculum seeks to give students practical experience using cutting-edge risk assessment methods in all facets of the process sector. In terms of fire, explosion, and toxic discharges, it analyzes the effects of significant dangers. Utilizing cutting-edge commercial software, these are modeled. Methods for encouraging a healthy safety culture in your workplace consider the role that human error plays in accidents.

The function of analytical investigation and root-cause analysis based on fault tree analysis is also explored throughout this training session.

Participants will be able to put their newfound abilities to use in the implementation of the company's HSE Management System. Your organization should be able to implement, evaluate, and review your professional development in addition to other aspects of HSE action plans.

## Outlines

### DAY 1 - Advanced Risk Assessment Techniques 1: HAZOP

- Introduction to hazards identification and analysis techniques
- Techniques for hazard identification and analysis- HAZOP
- Syndicate exercise- application of HAZOP to batch and continuous processes
- Integrating HAZOP within the risk management system
- Review of commercial HAZOP software

### DAY 2 - Mechanics of Fire, Explosion, and Toxic Releases

- The role of consequence analysis in QRA
- Types of Fires: Jet flame, pool fire, flash fire, BLEVE
- Types of Explosion: VCE, UVCE, pressure burst, dust explosion
- Vulnerability analysis
- Commercial software for modeling releases, fire, explosion, and toxic releases

### DAY 3 - The role of Quantified Risk Assessment [QRA]

- Failure Modes & Effects Analysis [FMEA]
- Decision trees and Event Tree Analysis [ETA]
- Sources of failure data
- Fault Tree Analysis [FTA]
- Quantification of ETA and FTA
- Evaluation of Individual and Societal Risks

### DAY 4 - Advanced Incidents Investigation Techniques

- The human contribution to accidents
- The role of root cause Analysis in identifying management system failures
- Accident investigation techniques

- Latent failure and root causes for incidents
- Techniques for root-cause analysis

#### DAY 5 - Promoting a positive safety culture

- Introduction to Safety Culture
- Techniques for improving safety culture
- Measuring improvements in safety culture
- Integrating safety culture within the HSE Management System

## Registration form on the Training Course: Advanced Process Risk Assessment & Risk Management

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