

HAZARD & OPERABILITY STUDY (HAZOP) & HAZARD IDENTIFICATION (HAZID) ANALYSIS

"Hazard & Operability Study (HAZOP) & Hazard Identification (HAZID) Analysis"

Schedule

Date	Venue	Fees
25 - 27 Aug 2026	Manama, Bahrain	USD 2495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Hazard and Operability Study (HAZOP) and Hazard Identification (HAZID) are systematic techniques used to identify and evaluate risks in complex processes, especially in high-risk industries. This course focuses on the principles of HAZOP and HAZID analysis, providing participants with the skills needed to assess operational risks and develop appropriate control measures.

The program blends theory with practical application, enabling participants to perform effective HAZOP and HAZID studies, enhance safety, and ensure that potential hazards are proactively managed before they lead to accidents or operational failures.

Objectives

By the end of this course, participants will be able to:

- Understand the key principles and techniques of HAZOP and HAZID analysis.
- Conduct comprehensive hazard identification and risk assessments.
- Develop actionable risk control strategies and safeguards.
- Implement HAZOP and HAZID studies to improve process safety and operational reliability.
- Communicate and document hazard analysis results effectively.

Why Attend

- Gain in-depth knowledge of HAZOP and HAZID techniques for risk analysis.
- Learn how to apply these tools in real-world, high-risk environments.
- Participate in hands-on exercises to improve your hazard analysis skills.
- Enhance your ability to contribute to process safety and risk management.
- Network with industry professionals and exchange valuable insights

Target Audience

This program is designed for:

- Safety professionals responsible for hazard analysis and risk management.
- Engineers and managers involved in process safety, operations, and reliability.
- Professionals in industries such as oil & gas, chemical processing, and manufacturing.
- Anyone responsible for conducting or overseeing HAZOP and HAZID studies in their organization.

Individual Benefits

Key competencies that will be developed include:

- Mastery of HAZOP and HAZID methodologies for identifying operational hazards.
- Ability to assess and mitigate risks through strategic controls and safeguards.
- Enhanced problem-solving skills for improving process safety.
- Expertise in preparing and presenting hazard analysis reports.
- Increased proficiency in leading hazard analysis sessions and workshops.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved ability to conduct thorough hazard assessments and risk evaluations.
- Enhanced capability to implement and manage safety measures effectively.
- Better communication of potential hazards and risks across teams.
- Stronger process safety culture and compliance with regulatory requirements.
- Reduced risks and operational disruptions due to effective hazard management.

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Interactive Lectures – In-depth understanding of HAZOP and HAZID methodologies and principles.
- Group Exercises – Practical sessions on conducting hazard identification and operability analysis.
- Case Studies – Real-world examples of HAZOP and HAZID application in various industries.
- Workshops – Hands-on activities to perform HAZOP/HAZID analysis on sample projects.
- Tools and Templates – Providing participants with the tools to apply hazard analysis in their own organizations.

Course Outline

Detailed 3-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to HAZOP and HAZID Analysis

- Module 1: Overview of HAZOP and HAZID (07:30 – 09:30)
- Introduction to Hazard & Operability Study (HAZOP) and Hazard Identification (HAZID).
- Importance of HAZOP and HAZID in risk management and safety.
- Key principles and procedures for conducting HAZOP/HAZID studies.
- Module 2: Hazard Identification Techniques (09:45 – 11:15)
- Methods for identifying hazards in process design and operation.
- Overview of hazard identification techniques used in HAZID.
- Practical examples of hazard identification in high-risk industries.
- Module 3: HAZOP Methodology (01:00 – 03:30)
- Detailed steps involved in conducting a HAZOP study.
- Identifying deviations from normal operations and their potential hazards.
- Hands-on session: Performing a mini HAZOP study on a sample process.

Day 2: Advanced HAZOP and HAZID Techniques

- Module 1: Risk Assessment and Evaluation (07:30 – 09:30)
- Evaluating the likelihood and impact of identified hazards.
- Techniques for assessing the risk level of hazards identified during HAZOP/HAZID studies.
- Group exercise: Risk assessment of a real-world hazard scenario.
- Module 2: Developing Control Measures (09:45 – 11:15)
- Creating effective control measures and safeguards to mitigate identified risks.
- Integrating control measures into the operational process.
- Case study: Developing control measures for a complex process hazard.
- Module 3: Effective Documentation of HAZOP/HAZID Results (01:00 – 03:30)
- Best practices for documenting hazard analysis and risk mitigation strategies.
- Structuring hazard analysis reports for clarity and completeness.
- Workshop: Writing a hazard analysis report for a given project.

Day 3: Practical Application and Final Review

- Module 1: Conducting a Full HAZOP Study (07:30 – 09:30)
- Step-by-step guide to conducting a complete HAZOP study.
- Roles and responsibilities of team members in a HAZOP session.
- Hands-on activity: Conducting a full-scale HAZOP study.
- Module 2: Challenges and Solutions in Hazard Analysis (09:45 – 11:15)
- Common challenges encountered during HAZOP/HAZID studies.
- Solutions and best practices for overcoming these challenges.
- Group discussion: Sharing lessons learned and strategies for improvement.
- Module 3: Final Case Study and Certification (01:00 – 03:30)
- Final case study on the application of HAZOP and HAZID in a real-world scenario.
- Q&A session and course evaluation.
- Certification process and concluding remarks.

Certification

Participants will receive a Certificate of Completion in Hazard & Operability Study (HAZOP) and Hazard Identification (HAZID) Analysis, validating their proficiency in conducting hazard analysis and improving process safety.

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