



OIL AND GAS | OG-044

HAZOP and Process Hazard Analysis

Contact

+31 85 7444446
info@aractech.com
<https://aractech.com>

Address

Waarderweg 50, 2031PB Haarlem - Netherlands.

Course content

Why Attend

Hazard and operability studies are the most widely used method for identifying process hazards and operability problems in oil, gas and chemical facilities. A well-led HAZOP can prevent major accidents and costly design changes, while a poor one creates false assurance.

This Aractech course teaches the HAZOP methodology in depth, including preparation, node selection, guidewords and parameters, deviations, causes, consequences, safeguards and recommendations. It also covers related techniques such as HAZID, what-if analysis, LOPA and SIL determination. Participants take part in practical HAZOP sessions on realistic process drawings.

Course Methodology

- Methodology presentations
- Practical HAZOP sessions on P&IDs
- Facilitation and scribing practice
- Case studies
- Group feedback

Course Objectives

- Explain the purpose and methodology of HAZOP
- Prepare HAZOP studies, nodes and documentation
- Apply guidewords to identify deviations
- Assess causes, consequences and safeguards
- Write clear HAZOP recommendations
- Understand related techniques including HAZID, LOPA and SIL

Course content

Target Audience

- Process and safety engineers
- Operations and maintenance engineers
- HAZOP team members and scribes
- Project engineers

Course outline

Detailed course outline

Day-by-day outline for HAZOP and Process Hazard Analysis.

Day 1 - Process Hazard Analysis Overview

- 09:00-09:39 | Role of PHA in process safety
- 09:39-10:18 | PHA techniques compared
- 10:18-10:57 | When to use HAZOP
- 10:57-11:00 | Regulatory expectations
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Regulatory expectations (continued)
- 12:05-12:43 | Team roles
- 12:43-14:00 | Exercise: Selecting PHA techniques

Day 2 - HAZOP Methodology

- 09:00-09:39 | Preparation and data
- 09:39-10:18 | Node selection
- 10:18-10:57 | Guidewords and parameters
- 10:57-11:00 | Deviations and causes
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Deviations and causes (continued)
- 12:05-12:43 | Consequences and safeguards
- 12:43-14:00 | Practice: HAZOP on a simple node

Course outline

Detailed course outline

Day-by-day outline for HAZOP and Process Hazard Analysis.

Day 3 - Conducting HAZOP Sessions

- 09:00-09:39 | Facilitation skills
- 09:39-10:18 | Recording and scribing
- 10:18-10:57 | Risk ranking
- 10:57-11:00 | Recommendations
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Recommendations (continued)
- 12:05-12:43 | Managing the team
- 12:43-14:00 | Workshop: Full HAZOP session

Day 4 - Related Techniques

- 09:00-09:39 | HAZID
- 09:39-10:18 | What-if and checklists
- 10:18-10:57 | Layers of protection analysis
- 10:57-11:00 | Safety integrity level determination
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Safety integrity level determination (continued)
- 12:05-12:43 | Bow-tie links
- 12:43-14:00 | Exercise: LOPA worked example

Course outline

Detailed course outline

Day-by-day outline for HAZOP and Process Hazard Analysis.

Day 5 - Close-Out and Quality

- 09:00-09:45 | Action tracking and close-out
- 09:45-10:30 | Revalidation
- 10:30-11:00 | Common HAZOP failures
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Common HAZOP failures (continued)
- 11:45-12:30 | Quality assurance
- 12:30-13:15 | Digital tools
- 13:15-14:00 | Capstone: HAZOP report review

Seminar dates

Available seminar dates

Live dates and pricing for HAZOP and Process Hazard Analysis generated from the course details page.

Date	Location	Format	Fee
2 - 6 November 2026	Rome	Classroom	€3,460
21 - 25 December 2026	Munich	Classroom	€3,225
18 - 22 January 2027	Vienna	Classroom	€3,225
15 - 19 February 2027	Barcelona	Classroom	€2,815
15 - 19 March 2027	Cape Town	Classroom	€1,625
19 - 23 April 2027	Frankfurt	Classroom	€1,875
17 - 21 May 2027	Barcelona	Classroom	€2,815
21 - 25 June 2027	Barcelona	Classroom	€2,815
19 - 23 July 2027	Rome	Classroom	€3,460
16 - 20 August 2027	Munich	Classroom	€3,225

Seminar dates

Available seminar dates

Live dates and pricing for HAZOP and Process Hazard Analysis generated from the course details page.

Date	Location	Format	Fee
20 - 24 September 2027	Vienna	Classroom	€3,225
18 - 22 October 2027	Barcelona	Classroom	€2,815
15 - 19 November 2027	Paris	Classroom	€3,825
20 - 24 December 2027	Frankfurt	Classroom	€1,875
2 - 6 November 2026	Online / Live	Online / Live	€1,815
21 - 25 December 2026	Online / Live	Online / Live	€1,815
18 - 22 January 2027	Online / Live	Online / Live	€1,815
15 - 19 February 2027	Online / Live	Online / Live	€1,815
15 - 19 March 2027	Online / Live	Online / Live	€1,815
19 - 23 April 2027	Online / Live	Online / Live	€1,815

Seminar dates

Available seminar dates

Live dates and pricing for HAZOP and Process Hazard Analysis generated from the course details page.

Date	Location	Format	Fee
17 - 21 May 2027	Online / Live	Online / Live	€1,815
21 - 25 June 2027	Online / Live	Online / Live	€1,815
19 - 23 July 2027	Online / Live	Online / Live	€1,815
16 - 20 August 2027	Online / Live	Online / Live	€1,815
20 - 24 September 2027	Online / Live	Online / Live	€1,815
18 - 22 October 2027	Online / Live	Online / Live	€1,815
15 - 19 November 2027	Online / Live	Online / Live	€1,815
20 - 24 December 2027	Online / Live	Online / Live	€1,815