

## What's the purpose?

To gain an understanding of the technique, application and limitations of LOPA. This course covers the different variations of the LOPA methodology: single cause, multiple cause, simple and complex. It does not provide detailed LOPA facilitator training but does cover the skills needed and the work that the facilitator must do as part of the LOPA.

## Who is this for?

Project Managers, Operation Managers, Process Engineers, Operators, HSE advisors and risk management practitioners.

## What does it cover?

- LOPA terminology
- Information required for LOPA and review of HAZOP worksheets
- LOPA – hazard consequences and target mitigated event likelihood
- LOPA – hazard causes and frequencies
- LOPA – independent protection layers and probability of failure on demand
- LOPA – conditional/event modifiers
- Application of the LOPA variations: (i) single cause, (ii) multiple cause, (iii) simple and (iv) complex
- Carrying out SIL Classification using LOPA
- Recording methods, software and reporting
- Common failings and limitations of LOPA
- Leading LOPA teams

## After completing the module you should be able to:

1. Apply the different variations of the LOPA technique
2. Critically review the LOPA technique and examples of output
3. Analyse how the LOPA technique can be applied at the different stages of a project's lifecycle such as FEED, detailed design, revalidation and decommissioning
4. Prepare for a LOPA workshop, determine the skills and actions necessary to lead a LOPA and how to generate a LOPA report

	Hours	Delivery Methods	
		Face-to-face	Distance learning
<b>Postgraduate</b>	80	2 days, followed by assessment	8 weeks duration
<b>Attendance only</b>	15	2 days	---

If you are a corporate client and would like a customised delivery, please contact the training team to discuss your requirements.

## What prior study is recommended?

Education, skills or experience equivalent to undergraduate level. Risktec modules: Principles of Risk Management, Hazard Identification, HAZOP Study