Methodologies for enhanced risk management and decision-making

A historical examination of the worldwide chemical process industry suggests that a simple awareness of the risks inherent in its processes does not suffice to ensure the safety of its resources (human and otherwise) and mitigate losses due to human frailty or other factors. The need of the hour is a thorough understanding and implementation of effective risk assessment along with a robust safety management system.

IIT Bombay’s 3-day course ‘Chemical Process Risk Assessment’ (CPRA) is aimed at meeting this need. Through its vigorous case study-based approach; engineers, plant designers/managers and safety professionals will understand important methodologies for qualitative and quantitative risk assessment so they can identify and quantify potential risks, and proactively find ways to prevent them or alleviate their effects.

**LEARNING OBJECTIVES**

With this knowledge-packed programme, you would:

- Understand the basic principles of risk estimation and assessment, so you can identify risks, estimate probabilities, understand potential consequences, and plan for emergencies and safety investments.
- Learn the methods used to estimate accident likelihood (frequency) and consequences, and probabilities of equipment/human loss.
- Become aware of sources of accidents and the need for computing risks to individuals and communities.
- Familiarise yourself with risk analysis as a decision-making tool for managing process risks and deciding safety investments.

**FACULTY**

By Prof. Sandip Roy

NOCIL Awardee for “Excellence in Design or Development of Process Plant and Equipment” from Indian Institute of Chemical Engineers (IIChE)

The focus of this course is on Risk Assessment in the context of Chemical Process Safety Management. If you are a chemical industry professional, it will help solidify your understanding of Risk Analysis and Risk Evaluation for more effective process risk management and decision-making.

With course elements like:

- Classroom lectures
- Case study discussions
- Software-based simulations and evaluations
- Self-reflection exercises

You will get a thorough grounding in CPRA so you are better prepared to comply with the Manufacture, Storage and Import of Hazardous Chemicals Rules instituted by the Ministry of Environment and Forests (Govt. of India).

**KEY INFO**

This programme is designed for chemical process industry professionals who want to understand risk assessment and how it can be applied for improving the efficacy of process risk management.

- Chemical engineers
- Plant designers
- Plant managers
- Safety professionals

**WHO WILL BENEFIT**

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Overview, importance & benefits of Chemical Process Risk Assessment (CPRA)

Qualitative & Quantitative Risk Assessment (QA)

Short-cut QA

Quantitative RA for emergency planning, safety investment & accident investigations

Estimation of probabilities for human/property loss

Estimation of probabilities for failure of equipment and process systems

Risk management

- Concepts and methods used
- Identification of individual & societal risks in chemical process facilities
- Criteria for risk acceptance

Case studies in Risk Analysis

Software-based evaluation of hazards & risks from fires, explosions & toxic releases

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