# Process Safety and Risk Engineering

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## Overview

Several major industrial accidents in recent years have caused enormous financial and human loss. Such accidents have made the public more aware of hazardous materials and increased their concern regarding the safety of such facilities. Lack of effective process safety and risk management practice in design, operation, and maintenance is attributed as one of the main cause of unwanted incident leading to huge losses. In response to this concern, government agencies around the world are requiring operators of processing facilities to demonstrate that these facilities are "safe." This requires quantification and minimization of the risk associated with design, operation, and maintenance of the facility. Unless the risk is low enough to be acceptable, an existing facility may not be allowed to operate, or a proposed facility might never be built. To achieve "safe" and uninterrupted operation, it is a must that personnel involved in the functioning of process facility (design, operation, and maintenance crew members) are trained for Process Safety and Risk Minimization practices. Process safety and risk minimization encompass process safety, engineering design safety, occupational safety and also inherent safety practice.

**Objectives:**

The primary objectives of the course are as follows:

i) Introducing participants to fundamentals of process safety and risk engineering;
ii) Generating a detailed understanding of risk-based safety measure design, risk modeling and simulation;
iii) Providing practical problems and solutions through case studies and discuss more recent advancements in the field of process safety and design.

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| **Modules** | **Module A: Fundamentals of Process Safety and Risk Engineering.**<br>**Module B: Process Safety Design & Safety Assessment.**<br>November 14- November 19, 2016<br>Number of participants for the course will be limited to fifty. |
| **You Should Attend If…** | ▪ Executives, engineers, safety supervisors/officers and researchers from process industry, service and government organizations including R&D laboratories and manufacturing units.<br>▪ Students at all levels (B.Tech/MSc/M.Tech/PhD) or Faculty from reputed academic institutions and technical institutions.<br>▪ You are a student or faculty from academic institution interested in learning **Process Safety Design and Risk Engineering** |
| **Fees** | The participation fees for taking the course is as follows:<br>**Participants from abroad : US $300**<br>**Industry/ Research Organizations: 5000**<br>**Academic Institutions: 2500**<br>The above fee includes all instructional materials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with accommodation on payment basis. |

# The Faculty

**Prof. Faisal Irshad Khan** is Profesor of Process Engineering and Vale Research Chair of Process Safety and Risk Engineering at Faculty of Engineering and Applied Science, Memorial University of Newfoundland, Canada. Dr. Khan's areas of research interest include safety and risk engineering, inherent safety, risk management, risk-based integrity assessment and management. He has authored six books and over 300 research articles in peer reviewed journals and conferences on safety, risk and reliability engineering. He got many honours and awards including S.K. Mitra Memorial Award from IIChE for safety research, Calcutta (1998), Short-listed among four scientists for the Young Scientist Award by Indian National Science Academy (2000), Nawab Zain Bahadur Memorial Medal (for outstanding research in environmental engineering) by the Institution of Engineers (India, 2002), New Opportunity Fund Award by Canada Foundation for Innovation (2003), Memorial University President's Award for Outstanding Research (2012), National Award- CSChE, Outstanding Research Award of Process Safety Management (2014), Memorial University President's Award for Outstanding Graduate Student Supervision (2014) and Dean's Award for Excellence Graduate Student Supervision in Memorial University of Newfoundland (2015). He is actively involved with multinational oil and gas companies on safety and asset integrity. He has held many workshops and training programmes on safety and risk management in different parts of the world including Tehran, Dubai, Beijing, Aberdeen, Doha, and Kuala Lumpur.

**Prof. S. K. Mehta,** Director SAIF/CIL/UCIM and Professor and former Chairman, Department of Chemistry, Panjab University, Chandigarh has made significant contributions in Surfactant Chemistry and Nanochemistry. Dr. Mehta is credited with more than 220 publications in international journals of repute and is an author of about 10 books/chapters. He has been conferred with renowned DAAD and JSPS fellowships several times, Bronze medal from Chemical Research Society of India (CRSI), authors award by Royal Society of Chemistry, UK, Haryana Vigyan Ratna award and Prof. W.U. Malik Memorial Award of Indian Council of Chemists (ICC) for his contributions in research.

**Mr Surinder Singh** is working as Assistant Professor at Dr SSB UICET Panjab University Chandigarh. He has a total teaching and research experience of more than 12 years. His areas of interest include separation technology and environment engineering.

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## Course Co-ordinator


Mr. Surinder Singh,
Phone: 9417845798
E-Mail: sonubhinder@hotmail.com

Prof. S. K. Mehta
Phone: 9417786061
E-mail: skmehta@pu.ac.in


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