



Elements of Applied Process Engineering

August 24-28, 2025

Hilton Garden Inn, The Avenues Mall

750
KWD



Course Instructor(s)



Mr. Mervyn Frampton (UK)

Mr. Mervyn Frampton (UK), is a **Senior Process Engineer** with over **30 years** of industrial experience within the **Oil & Gas, Refinery, Petrochemical** and **Utilities** industries. His expertise lies extensively in the areas of **Process Troubleshooting, Distillation Towers, Fundamentals of Distillation for Engineers, Distillation Operation and Troubleshooting, Advanced Distillation Troubleshooting, Distillation Technology, Vacuum Distillation, Distillation Column Operation & Control, Oil Movement Storage & Troubleshooting, Process Equipment Design, Applied Process Engineering Elements, Process Plant Optimization, Revamping & Debottlenecking, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Monitoring and Catalyst Selection & Production Optimization.**

Course Description

This course covers the application of chemical engineering theory to the practical demands of applied process engineering. The course will be presented in interactive format with many industrial examples and case studies. Participants will have the opportunity to solve sample problems with the help of the instructor.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on process engineering and discuss the chemical & physical aspects as well as the processes and process variables used in applied process engineering
- Prepare PFDs and P&IDs in a professional manner
- Perform material/heat balance and fluid flow calculations
- Acquire knowledge with the various process development including process sketch, diagrams and unit operations
- Employ the application of fluid dynamics specifically its piping system design and flow systems and determine the different flow equipment used in process engineering
- Enumerate heat transfer components by explaining the elements of energy balances, heat exchangers, air coolers and fired heaters
- Develop an understanding on mass transfer attributes including distillation, tray performance & constraints, humification and refrigeration
- Identify the different types of chemical reactors and describe petroleum processing reactions including hydro treating, catalytic reforming & hydro cracking
- Discuss the process control applied in process engineering and identify the various construction materials as well as the method of selecting the materials to be used
- Carryout process risk analysis particularly the various evaluation methods and HAZOP study

Who Should Attend

This course provides an overview of the major elements of applied process engineering for process and project engineers as well as piping designers. The course will also be valuable as a refresher for experienced chemical engineers and those who are not familiar with some aspects of applied process engineering. Additionally, managers and supervisors who have no formal training in chemical engineering should find value in this course.