

CHE-843 Separation Processes in Chemical Engineering

Credit Hours: 3

Pre-requisites: Nil

Course Objectives

- To give a unified approach to separation processes in chemical engineering.
- To discuss both mechanical and thermal separation processes with emphasis on the designing of separation equipment.
- To teach students about the separation process at an advanced level.

Course Contents

- Introduction: Separation of solid particles from fluids.
- Sedimentation of particles, Liquid filtration & Centrifugal separations
- Leaching and extraction, Gas absorption & Azeotropic and extractive distillation
- Crystallization, Drying, Adsorption process & Ion exchange
- Chromatographic separation processes
- Details of lab work workshop practice (if applicable).

Course Outcomes

- After studying the course, the graduate will be able to apply the attained knowledge in the research area related to designing of separation equipment.

Recommended Reading (including Textbooks and Reference books)

- Chemical Engineering: Particle Technology and Separation Processes Vol. 2, Coulson and Richardson
- Chemical Process Equipment: Selection and Design S.M. Walas
Multistage Separation Process by F, M, Khoury