Introduction to chemical engineering

Crédits ECTS
3 crédits

Période de l'année
Automne

En bref

Langue de cours: Anglais

Présentation

Prérequis

Basic knowledge of mathematics, chemistry, and physics.

Objectifs d'apprentissage

- Apply fundamental mass and energy balance principles to analyze chemical processes.
- Understand and model basic chemical reactors, including ideal reactor types and their performance characteristics.
- Describe and analyze common separation and purification processes (distillation) used in chemical engineering.
- Develop a basic understanding of chemical process flows and the integration of individual unit operations within a process system.

Description du programme

This course introduces the fundamentals of chemical engineering processes, focusing on mass and energy balances, basic reactor models, and common separation and purification operations. It provides students with the essential tools to analyze simple chemical processes and understand the behavior of major unit operations.

The course also presents an overview of how these unit operations are integrated into complete process flowsheets, helping students develop a system-level understanding of chemical process design and analysis commonly used in chemical engineering practice.

Bibliographie

"Elementary Principles of Chemical Processes" by Richard M. Felder & Ronald W. Rousseau.

Equipe pédagogique

Jiupeng DU (jiupeng.du@centrale-med.fr)

Total des heures		**24h**
CM	Cours Magistral	16h
TD	Travaux Dirigés	8h

Infos pratiques

Nom responsable UE

Responsable pédagogique

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