

Dispersed systems

Introducing

Description

- Basic concepts:
 - Motion of particles, drops and bubbles in a fluid (various separation regimes, spherical and non spherical particles, concentrated media)
 - fluid flow through a porous media (pressure drop, resistance)
 - hydrodynamics of packed towers
- Unit operations:
 - cake filtration
 - sedimentation
 - fluidisation
- Dimensional analysis

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

- basic concepts of unit operations associated with momentum transfer phenomena for dispersed systems (bubbles, drops, particles)
- basic concepts of fluid flow through a porous medium
- principle of dimensional analysis
- mass and energy balance

The student will be able to apply these concepts:

- to the design of different unit operations: sedimentation, filtration
- to the calculation of hydrodynamics of a packed tower, of a fluidised bed

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse