Separation Processes I (CENG0010)

Description

Aims:
1. To provide an understanding of the principles of fluid separation processes;
2. To develop skills in the design of practical fluid separation equipment in the context of sustainability and sustainable development;
3. To provide a basic understanding of process simulation;

Learning Outcomes:

On completion of this module students should:
be able to understand the mass and heat transfer phenomena involved in fluid processes;
be familiar with the procedures for the design of fluid separation equipment in the context of sustainability and sustainable development;
be able to select an appropriate fluid separation process to meet a required separation performance;
be able to simulate simple steady-state process flowsheets and mass transfer operations;

Synopsis:
Fundamentals of mass transfer including driving forces, the ideal stage, mass transfer units, stage efficiency;
and methods of two-phase contacting for the purpose of mass transfer;
With a focus on distillation, absorption and extraction consider:
Estimation of thermodynamic properties;
Design and analysis methodologies;
Graphical methods for analysis;
Equipment design including column design and column internals;

Key information

Year 2018/19
Credit value 15 (150 study hours)
Delivery UG L5, Campus-based
Reading List View on UCL website
Tutor Prof Eva Sorensen
Term Term 1
Timetable View on UCL website

Assessment

- Written examination (main exam period): 70%
- Coursework: 30%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk
Fundamentals of process flowsheeting and mass transfer simulation;
Chemical Engineering

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