



Chemical Engineering

Separation Processes I (CENG0010)

Description

Aims:

- To provide an understanding of the principles of fluid separation processes;
- To develop skills in the design of practical fluid separation equipment in the context of sustainability and sustainable development;
- 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 | 2019/20 |
| 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



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| Year | 2019/20 |
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