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: 2020/21  
Credit value: 15 (150 study hours)  
Delivery: UG L5, Campus-based  
Reading List: View on UCL website  
Tutor: Dr Vasileios Charitopoulos  
Term: Term 1  
Timetable: View on UCL website

Assessment

- Written examination (main exam period): 70.0%  
- Coursework: 30.0%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk

Disclaimer: All information correct as of March 2020. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
Fundamentals of process flowsheeting and mass transfer simulation
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Year: 2020/21
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Term: Term 1
Timetable: View on UCL website

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