Chemical Reaction Engineering II (CENG0018)

**Description**

**Aims:**
To provide an understanding of advanced reactor design and the principles and phenomena that are present in multiphase and catalytic reactions.

**Learning Outcomes:**
Upon completion of this module student should be able to:

- design advanced chemical reactors;
- evaluate the influence of mass transfer and hydrodynamics on reactor performance;
- apply advanced concepts for the design of chemical reactors;
- combine analytical and computational approaches for reactors design;
- critically evaluate what phenomena and under what circumstances need to be considered as related to the level of accuracy required for a specific design problem;
- gain experience on the operation and data analysis form laboratory chemical reactors;

**Synopsis:**

- Nonisothermal reactor design at steady and unsteady state
- Multiple reactions in PFR/CSTR
- Introduction to heterogeneous catalysis
- Mass transfer and reaction in heterogeneous catalytic reactions
- Design of fixed bed reactors
- Mass transfer and reaction in gas/liquid and gas/liquid/solid reactions
- Design of gas/liquid and las/liquid/solid reactors
- Nonideal reactors and residence time distribution

**Key information**

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<td><strong>Credit value</strong></td>
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**Assessment**

- Written examination (main exam period): 80%
- Coursework: 20%

**Find out more**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk)
The Masters level (level 7) version of the module (CENG0018) has a stronger focus on unseen, and more open ended, problem solving.
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Timetable View on UCL website

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Disclaimer: All information correct as of June 2019. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
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