Advanced Process Optimisation (CENG0023)

Description

Aims:
Advanced use of computers in process design, operation and management. Particular emphasis is placed on Process Synthesis.

Learning Outcomes:
On completion the students will be expected:

- to be aware of the role of optimisation techniques in plant design, operation and management;
- to be aware of numerical techniques for solving continuous and discrete optimisation problems;
- to be able to formulate and solve complex optimisation problems both analytically and using computational tools;
- to be aware of techniques for process synthesis and be familiar with a contemporary tool

Synopsis:

- Approaches to process synthesis and process optimisation.
- Linear programming by the simplex and graphical methods.
- Introduction non-linear process optimisation, optimality criteria, conditions for an optimum, unconstrained optimisation, constrained optimisation. Application to flowsheet optimisation.
- Process synthesis under uncertainty. Flexibility analysis.
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Key information

Year 2019/20
Credit value 15 (150 study hours)
Delivery UGM L7, Campus-based
Reading List View on UCL website
Tutor Prof Lazaros Papageorgiou
Term Term 1
Timetable View on UCL website

Assessment

- Written examination (main exam period): 50%
- Coursework: 50%

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 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.