Biochemical Engineering

Bioprocess Systems Engineering (BENG0038)

**Description**

To provide students with skills in advanced modelling, optimisation and statistical techniques such that they are adequately equipped to address problems related to evaluating the cost-effectiveness and robustness of alternative bioprocess design strategies.

Upon completion of the course, a student should be able to:

- Use a set of software tools for discrete-event simulation, Monte Carlo simulation and linear and mixed-integer programming
- Perform multi-variate data analysis to derive insights from complex datasets
- Formulate decision problems related with bioprocessing design in a structured way and select appropriate methods to solve them
- Build simulation models, optimise key decision variables and critically analyse output results
- Conduct advanced research in Bioprocess Systems Engineering
- Take the acquired expertise into industry to work as developers of simulation/optimisation/process economics models in real biomanufacturing companies

**Key information**

- **Year**: 2018/19
- **Credit value**: 15 (150 study hours)
- **Delivery**: PGT L7, Campus-based
- **Reading List**: [View on UCL website](#)
- **Tutor**: Dr Sofia Simaria
- **Term**: Term 2
- **Timetable**: [View on UCL website](#)

**Assessment**

- Written examination (main exam period): 65%
- Coursework: 35%

**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)
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Disclaimer: All information correct as of December 2018. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.