



Biochemical Engineering

Fermentation and Bioreactor Engineering (BENG0014)

Description

This course provides students with a detailed understanding of bioreactor design, scale-up and operation. Particular themes of the course include the interaction of biological catalysts/cells with the engineering environment within a bioreactor, the theoretical basis of process scale-up and scale-down, and the impact of cell engineering on bioreactor design and operation. Attention is paid to the instrumentation and control of bioreactors and issues underlying biosafety with respect to contained operation.

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

- Gain in-depth knowledge required to design a fermenter in terms of mixing, power input and oxygen capabilities
- Specify bioreactor design, including monitoring and control system
- Understand how the engineering environment affects fermentation and cell culture
- Perform design calculations with regards to scale-up and scale-down of a fermentation process
- Select appropriate sterilisation methods and determine operating conditions

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	UG L5, Campus-based
Reading List	View on UCL website
Tutor	Dr Frank Baganz
Term	Term 1
Timetable	View on UCL website

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