



Biochemical Engineering

Bioprocess Analysis (BENG0006)

Description

To provide the basic principles of bioprocess analysis and design. This will be achieved by first introducing students to the concept of whole bioprocess sequences and process flow sheets. Mass balance techniques for the key unit operations within the bioprocess sequence will then be taught.

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

- Learn the fundamental principles underpinning the main bioprocess unit operations.
- Understand the principles of mass and energy balancing and how this is used in process analysis.
- Familiarise with primary separation processes and conduct mass and energy balances on these.
- Learn different methods of product release by homogenisation, conduct an analysis of selective release options and consider the impact of product release on subsequent unit operations.
- Understand the principle of chromatographic beds and beads function, be able to interpret adsorption isotherms and modes of action and conduct a mass balance analysis of chromatography operations.
- Familiarise with formulation and product dose forms suitable for biological medicines and with the definition of drug substance and drug product.

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	UG L4, Campus-based
Reading List	View on UCL website
Tutor	Dr Andrea Rayat
Term	Term 2
Timetable	View on UCL website

Assessment



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

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