



Biochemical Engineering

Applied Cell and Molecular Biology (BENG0048)

Description

As biologics and cell-based therapies become an increasingly important product class in the pharmaceutical industry so the skill sets of process engineers must expand to suit. The ability to acquire manipulate human cells and manage DNA-based tools, conventionally restricted to product development, is now being applied to process development within a 'whole bioprocess' approach. This course will provide an understanding of the science and techniques of cell and molecular biology as they relate to development of cell-based platform technologies. Application themes include host cells for biopharmaceutical manufacturing (biosimilars, vaccines), cells as therapeutics within regenerative medicine and development of whole cell biocatalysts in industrial biotechnology.

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

- Utilize basic recombinant DNA techniques
- Communicate with life scientists using appropriate terminology
- Apply biology knowledge acquired on yeast, mammalian and bacterial cells for industrial use
- Understand the biology of human stem cells
- Relate molecular biology to bioprocessing challenges

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	UG L6, Campus-based
Reading List	View on UCL website
Tutor	Dr Kenth Gustafsson
Term	Term 2
Timetable	View on UCL website

Assessment



- Written examination (main exam period): 60%
- Coursework: 40%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk



Biochemical Engineering

Applied Cell and Molecular Biology (BENG0048)

Description

As biologics and cell-based therapies become an increasingly important product class in the pharmaceutical industry so the skill sets of process engineers must expand to suit. The ability to acquire manipulate human cells and manage DNA-based tools, conventionally restricted to product development, is now being applied to process development within a 'whole bioprocess' approach. This course will provide an understanding of the science and techniques of cell and molecular biology as they relate to development of cell-based platform technologies. Application themes include host cells for biopharmaceutical manufacturing (biosimilars, vaccines), cells as therapeutics within regenerative medicine and development of whole cell biocatalysts in industrial biotechnology.

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

- Utilize basic recombinant DNA techniques
- Communicate with life scientists using appropriate terminology
- Apply biology knowledge acquired on yeast, mammalian and bacterial cells for industrial use
- Understand the biology of human stem cells
- Relate molecular biology to bioprocessing challenges

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	PGT L7, Campus-based
Reading List	View on UCL website
Tutor	Dr Kenth Gustafsson
Term	Term 2
Timetable	View on UCL website

Assessment



- Written examination (main exam period): 60%
- Coursework: 40%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk

Biochemical Engineering

Applied Cell and Molecular Biology (BENG0048)

Description

As biologics and cell-based therapies become an increasingly important product class in the pharmaceutical industry so the skill sets of process engineers must expand to suit. The ability to acquire manipulate human cells and manage DNA-based tools, conventionally restricted to product development, is now being applied to process development within a 'whole bioprocess' approach. This course will provide an understanding of the science and techniques of cell and molecular biology as they relate to development of cell-based platform technologies. Application themes include host cells for biopharmaceutical manufacturing (biosimilars, vaccines), cells as therapeutics within regenerative medicine and development of whole cell biocatalysts in industrial biotechnology.

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

- Utilize basic recombinant DNA techniques
- Communicate with life scientists using appropriate terminology
- Apply biology knowledge acquired on yeast, mammalian and bacterial cells for industrial use
- Understand the biology of human stem cells
- Relate molecular biology to bioprocessing challenges

Key information

Year	2019/20
Credit value	15 (150 study hours)
Delivery	UGM L7, Campus-based
Reading List	View on UCL website
Tutor	Dr Kenth Gustafsson
Term	Term 2
Timetable	View on UCL website

Assessment



- Written examination (main exam period): 60%
- Coursework: 40%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk