

Liverpool John Moores University

Title: CELL TECHNOLOGY
Status: Definitive
Code: **7104BTBMOL** (124249)
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
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Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 36

Total Learning Hours: 200 **Private Study:** 164

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	21
Practical	9
Seminar	4

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Examination - essay questions	60	2
Report	Report	Practical report	40	

Aims

To provide an understanding of cell culture as a technological component of aspects

of biological research and commercial exploitation.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate an advanced understanding of the applications of cell technology and critically discuss the techniques used in culturing animal cells.
- 2 Critically discuss the principals involved in the commercial production of therapeutic agents from cells.
- 3 Analyze, interpret and critically discuss data relating to cell technology.
- 4 Critically evaluate methods which are commonly used in plant cell culture.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Examination	1	2	4
Report	3	4	

Outline Syllabus

Animal cell culture methods and factors necessary for the maintenance and growth of cells in culture. Design of culture facilities. Safety issues.

Genetic engineering of animal cells: infection, expression vectors, immortalised cell lines, transgenic animals.

Animal cell products and commercialisation.

Plant cell culture and commercial products derived from plant cells.

Protein expression and processing. Scale-up, bioreactors, process control and downstream processing.

Learning Activities

Lectures, practical.

Notes

This module provides an insight into the principles and practical techniques involved in the exploitation of animal cell processes for the commercial and healthcare sectors.