

Summary Information

Module Code	6103BCBMOL
Formal Module Title	Advanced Cell and Molecular Biology
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Helen Burrell	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
Sandra Fawcett	Yes	N/A
Kehinde Ross	Yes	N/A
Andrew Powell	Yes	N/A
Nicholas Bryan	Yes	N/A
Giles Watts	Yes	N/A
Adrian O'Hara	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	44
Workshop	10

Module Offering(s)

Offering Code	Location	Start Month	Duration
			12 Weeks

Aims and Outcomes

Aims	To provide the student with state of the art knowledge of central aspects of cell and molecular biology and to encourage development of skills for experimental design.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Evaluate current research topics in cell and molecular biology
MLO2	Evaluate scientific literature to be able to design experiments.

Module Content

Outline Syllabus
1) Control of the cell cycle and apoptosis 2) Cell biology of tissue engineering, cell migration and wound healing 3) Cell cytoskeleton and extracellular matrix research 4) Advanced molecular biology: control of transcription, DNA modification, gene expression, epigenetics, microRNA 5) Genetic engineering and its associated methodology 6) Genotype-phenotype correlation and its use in personalised medicine 7) Omics and systems biology

Module Overview

The aim of this module is to provide you with state-of-the-art knowledge of central aspects of cell and molecular biology and to encourage development of skills for experimental design. The module will enable you to critically analyse research topics from cell and molecular biology and to design theoretical experiments on a given topic.

Additional Information

This module will enable students to critically analyse research topics from cell and molecular biology and to design theoretical experiments on a given topic. Journal articles for this module will be given by each lecturer as required for each teaching block.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	exam	60	3	MLO1
Practice	experimental design	40	0	MLO2