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Title: ADVANCED CELL AND MOLECULAR BIOLOGY
Status: Definitive
Code: **6103BCBMOL** (122495)
Version Start Date: 01-08-2021

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

Team	Leader
Helen Burrell	Y
Giles Watts	
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Kehinde Ross	
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Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 57
Total Learning Hours: 200 **Private Study:** 143

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	44
Workshop	10

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	ASS2	exam	60	3
Report	ASS2	experimental design	40	

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.

Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate current research topics in cell and molecular biology
- 2 Evaluate scientific literature to be able to design experiments.

Learning Outcomes of Assessments

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

exam	1
experimental design	2

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*

Learning Activities

Lectures
Workshops

Notes

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.