

Summary Information

Module Code	3421FNDSCI
Formal Module Title	Introduction to Molecular Biology and Genetics
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 3
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Adrian O'Hara	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
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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
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Lecture	40
Practical	6
Tutorial	6
Workshop	6

Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To provide an introduction to molecular biology and genetics (at NQF level 3) for students progressing to programmes of study offered in PBS.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Outline DNA replication, transcription and translation processes and demonstrate understanding of their regulation
MLO2	Describe basic genetics (diversity, inheritance and evolution)
MLO3	Outline the cell cycle and be able to highlight the differences between mitosis and meiosis.
MLO4	Demonstrate an appreciation of modern molecular biology techniques

Module Content

Outline Syllabus
DNA (prokaryotic and eukaryotic), genes and chromosomes DNA and protein synthesis The cell cycle, mitosis and meiosis Control of gene expression Regulation of transcription and translation Genetic diversity Inheritance (chi-squared goodness of fit) Populations: Hardy-Weinberg principle Evolution Using genome projects Recombinant DNA technology Genetic fingerprinting

Module Overview

Additional Information
To provide an introduction to molecular biology and genetics (NQF level 3).

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	Exam	70	2	MLO2, MLO1, MLO3
Presentation	Poster	30	0	MLO4