Module Proforma

Approved, 2022.02

Summary Information

Module Code	3461FNDSCI
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	Pass/Not Pass

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

Partner Module Team

Contact Name	Applies to all offerings	Offerings

Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours

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 the Pharmacy programme.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Describe 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 chromosomesDNA and protein synthesisThe cell cycle, mitosis and meiosisControl of gene expressionRegulation of transcription and translationGenetic diversityInheritance (chi-squared goodness of fit)Populations: Hardy-Weinberg principleEvolutionUsing genome projectsRecombinant DNA technologyGenetic fingerprinting

Module Overview

Additional Information
To provide an introduction to molecular biology and genetics (NQF level 3) for students progressing to the Pharmacy programme.A core module for all Level 3 students on Pharmacy with a foundation year. This module is Pass/Fail with a minimum 55% requirement in each assessed item.

Assessments

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