

Summary Information

Module Code	6110BMBMOL
Formal Module Title	Medical and clinical genetics
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	35
Practical	6
Workshop	8

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	This module will enable students to develop an in depth understanding of the origins, roles and investigation of genes in disease and the strategies employed for the prevention, diagnosis, treatment and research of the genetic basis of disease.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate a reflective understanding of the basis of genetic disease and its investigation.
MLO2	2	Use IT skills and digital capability to apply principles of interpretation to genetic data
MLO3	3	Critically evaluate the management and treatment of genetic disease.

Module Content

Outline Syllabus	Gain and loss of function mutations, single gene defects, multifactorial conditions, epigenetics, familial and sporadic disease. Systems covered include: Cardiovascular, Endocrine, Liver, Gut, Renal and RespiratoryTypical examples: sickle cell disease, cystic fibrosis, Duchenne Muscular dystrophy, haemophilia, Fragile X, Huntington's disease, Alzheimer's disease, Parkinson's disease.Developmental genetics and abnormalities.Phenotype to genotype and genotype to phenotype. human genome project.Bioinformatics.Overview of diagnostic and research techniques including PCR, multiplex assays, blotting techniques, microarrays, FISH.Approaches to gene therapy and precision medicine.
Module Overview	
Additional Information	This module aims to develop understanding of the contribution of chromosomes and genes to health and disease. A range of disorders will be covered with an introduction to relevant techniques and therapeutic approaches.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Centralised Exam	50/50 MCQ and SAQ	50	2	MLO1, MLO3
Report	Analysis based report	50	0	MLO2

Module Contacts