

Genetics & Health

Module Code:	CLS5002-B
Academic Year:	2018-19
Credit Rating:	20
School:	School of Pharmacy and Medical Sciences
Subject Area:	Clinical Sciences
FHEQ Level:	FHEQ Level 5
Module Leader:	Dr Talat Nasim

Additional Tutors:

Dr Krzysztof Poterłowicz, Professor Tim Palmer, Professor Mohamed El-Tanani, Dr Morgan Denyer

Pre-requisites:	Integrated Medical Sciences 2017-18
Co-requisites:	

Contact Hours

Type	Hours
Lectures	19
Tutorials	8
Laboratory	4
Directed Study	169

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Semester 2 (Feb - May)

Module Aims

To facilitate the development and application of knowledge of the principles of human genetics in the investigation of representative disease states.

Outline Syllabus

Chromosomes and inheritance, alleles, genes and linkage; human genome project; molecular and cytogenetic diagnostic techniques and their use in the diagnosis of genetic disorders; gene sequencing and real-time PCR, splicing assays and Western blot analyses, current techniques used to map genes within the human genome; pedigree analysis; autosomal dominant and recessive diseases; sex-linked diseases; multifactorial inheritance; mutant gene identification and mapping; mutagenesis and cancer; DNA damage and repair; multiple mutations and the application of bioinformatics, pharmacogenetics and other applications within medical genetics; investigation of a genetic disorder eg pulmonary arterial hypertension; resolution of genetic disorders; ethical, social and psychological issues associated with gene testing and gene therapy; genetic counselling.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1 Describe, compare and evaluate the clinical manifestation of a range of genetic diseases and explain their underlying genetic causes.
- 2 Interpret and evaluate information gained from routine techniques used in clinical genetics
- 3 Use analytical, problem-solving and written communication skills.

Learning, Teaching and Assessment Strategy

Information outlining the knowledge and understanding required will be delivered in lectures and you will use your directed study time to consolidate the taught component. In workshops and tutorials, clinical genetics case scenarios will be used to reinforce the taught component, as well as aid development of analytical, problem-solving and communication skills. Formative assessment of your knowledge and understanding will allow you to monitor your progress on the module and develop your skills in writing timed essays.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - closed book	One written 2hr examination - MCQ & Essay-based Questions - End Semester 2	2 hours	100%	Yes

Legacy Code (if applicable)

CS-5001D

Reading List

To view Reading List, please go to [rebus:list](#).