

Module Details	
Module Title	Genetics & Health
Module Code	CLS5002-B
Academic Year	2020/1
Credits	20
School	School of Pharmacy and Medical Sciences
Subject Area	Clinical Sciences
FHEQ Level	FHEQ Level 5
Pre-requisites	N/A
Co-requisites	N/A

Contact Hours	
Type	Hours
Lectures	2
Online Lecture (Synchronous)	25
Online Seminar (Synchronous)	16
Practical Classes or Workshops	4
Directed Study	153

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year

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, chromosomal abnormalities 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.

Learning and teaching sessions will be mixture of both face to face and active online sessions. There will be a combination of face-to-face Lectures, Online Lecture (Synchronous), Online Seminars (Synchronous) and Practical Classes.

Learning Outcomes

Outcome Number	Description
1	Describe, compare and evaluate the clinical manifestation of a range of genetic diseases and explain their underlying genetic causes.
01	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
02	Interpret and evaluate information gained from routine techniques used in clinical genetics.
3	Use analytical, problem-solving and written communication skills.
03	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
Summative	Examination - Open Book	Online assessment (essay based questions) - end of semester 2	2 hour	100%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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