UNIVERSITY of BRADFORD

Module Descriptor

Integrated Medical Sciences

Module Code:	CLS4004-C
Academic Year:	2018-19
Credit Rating:	30
School:	School of Pharmacy and Medical Sciences
Subject Area:	Clinical Sciences
FHEQ Level:	FHEQ Level 4
Module Leader:	Dr Stacy-Paul Wilshaw

Additional Tutors:

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	53
Tutorials	10
Laboratory	16
Directed Study	221

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Academic Year (Sept - May)

Module Aims

To provide a basic introduction to the molecules, cells and tissues which underpin normal structure and function and to provide basic knowledge of embryology and genetics. To provide a basic introduction to the physiology, pharmacology, infection and immunology which underpin normal structure and function. To facilitate an understanding of how

abnormalities of structure can lead to functional disorder and disease processes and the scientific basis for infectious and non-infectious disease.

Outline Syllabus

Light Microscopy and introduction to ultra-structural examination of tissue and diagnostic use. Cells, genes and organelles: cell structure and function. Introduction to medical and clinical genetics. Genetic variation and chromosomes. Screening for genetic abnormalities. Gene polymorphisms and pharmacogenomics.

Epithelia and connective tissue/skin; Relationship between epithelial defects and diseases. Connective tissues; blood cells and disorders, blood vessels and lymphatic. Muscle and nerves; skeletal, cardiac and smooth muscle, central nervous system, Skeletal Tissues; cartilage, joints and bone. Exocrine and endocrine system. Cardiac and smooth muscle. Male and female reproductive systems.

Introduction to anatomy, anatomy of the pelvis and reproductive organs.

Basic embryology. Embryological derivation of tissues. Reproduction.

Enzyme and protein structure and function; Enzymes in disease.
Membranes and lipids; transport across membranes, cholesterol and lipoproteins.

Overview of the nervous system and neurosecretion. Basic concepts in pharmacology. Skeletal muscle and muscle contraction. Neuromuscular transmission. Passage of drugs across membranes.

Causes of infection. Hospital acquired infection and antibiotic resistance. Diagnosis, treatment and prevention of infections. Immunity and infection; Introduction to immunology. Non-immunological defence mechanism.

Principles and regulation of the immune response. Autoimmune disease. Aetiology of cancer and neoplasia.

Module Learning Outcomes

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

1. Describe the normal structure and function of molecules, cells and tissues which underpin normal structure and function and their relevance to the diagnosis of disease.

2. Describe the fundamentals of anatomy, physiology, pharmacology, infection and immunology which underpin normal structure and function and their relevance to the diagnosis of disease and therapeutic strategies.

3. Use basic histological techniques, be able to recognise cells, tissues and organs, successfully use a light microscope, describe and recognise transmission electron microscope images.

4. Apply scientific principles to medical practice.

5. Be able to work in small groups to achieve given targets and review your progress on the module.

Learning, Teaching and Assessment Strategy

Information outlining the knowledge and understanding required is delivered in lectures. Tutorials, practicals and workshops will be used to reinforce the taught component and formative assessments will allow you to monitor your progress. These will be supplemented by web-based learning and self-directed learning to support each topic will take place within the directed study time.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - MCQ	Written examination	1.5 hours	60%	Yes
Summative	Coursework	Coursework Assessment including group assessment Semester 1		30%	No
Summative	Classroom test	Histology spot test	1 hour	10%	No

Legacy Code (if applicable)

CS-4001T

Reading List

To view Reading List, please go to **rebus:list**.