

Module Details	
Module Title	Cell and Tissue Biology
Module Code	BIS4008-B
Academic Year	2020/1
Credits	20
School	School of Chemistry and Biosciences
Subject Area	Biomedical Science
FHEQ Level	FHEQ Level 4
Pre-requisites	N/A
Co-requisites	N/A

Contact Hours	
Type	Hours
Online Lecture (Synchronous)	26
Practical Classes or Workshops	11.5
Directed Study	162.5

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims
To introduce the structure and function of cells and tissues, including how abnormalities of structure and function can lead to disorder and disease processes.

Outline Syllabus

This module will cover the major cellular organelles and their functions, including: the nucleus, mitochondria, endoplasmic reticulum, the cytoskeleton, the Golgi, endosomes and lysosomes. Differences between eukaryotic and prokaryotic cells will also be discussed. During the module students will also be introduced to the tools used to investigate organelle function.

Cell-cell junctions and adhesion to the extracellular matrix will also be covered.

The module will discuss tissue biology including: epithelia/skin; connective tissues; blood vessels and lymphatics; muscles (skeletal, cardiac and smooth); the central nervous system; the autonomic nervous system; skeletal tissues; cartilage, joints and bone; the exocrine and endocrine system; the respiratory system; the gastrointestinal system and renal system.

The topics will be illustrated with reference to pathological conditions where appropriate.

Learning Outcomes

Outcome Number	Description
01	Identify, select and explain fundamental concepts and principles of cell microstructure and tissue organisation (HCPC standard 13).
02	Demonstrate some breadth and depth of awareness and understanding of the broad underlying concepts of microscopy, including sample preparation.
03	Conduct practical laboratory investigations using a light microscope (HCPC standard 14).
04	Evaluate and interpret data from electron micrographs (HCPC standard 14).
05	Work in accordance with laboratory health and safety protocols (HCPC standards 3, 15).
06	Work in small groups, using available resources, to achieve given tasks/ targets and recognise the need for effective time management (HCPC standard 1).

Learning, Teaching and Assessment Strategy

Information outlining the knowledge and understanding required of this module is delivered in lectures. Supplementary material and formative questions will also be made available via the virtual learning environment (VLE). Practical laboratory sessions also provide the opportunity to gain experience in understanding basic microscopy and demonstrate the ability to identify and classify human tissue. Students will undertake a formative and summative 'spot test' to identify tissue types and will be assessed summatively on lecture material and practical elements in the final examination. During directed study hours, students are expected to undertake reading to consolidate and expand on the content of formal taught sessions; research and prepare for assessments and revise material from formal taught sessions. Private study will be facilitated and supported via the use of the VLE which will provide coursework advice and feedback, and revision support. Reassessment of failed elements will be as per the initial method of assessment. Where reassessment of the laboratory practical element is required, students will be given a data set or an opportunity to complete the laboratory practical on an alternative occasion, whichever is more appropriate.

Mode of Assessment				
Type	Method	Description	Length	Weighting
Summative	Examination - Open Book	Online MCQ assessment	1 hour 30 mins	60%
Summative	Coursework	Multiple choice questions on the workshop	30 mins	10%
Summative	Coursework	Spot test with MCQ questions on the laboratory practicals	1 hour	30%
Formative	Coursework	Multiple choice question on the workshop (LO 1-4)	30 minutes	N/A
Formative	Coursework	Practice spot test on the laboratory practicals (LO1-6)	30 minutes	N/A
Formative	Classroom test	Formative multiple choice quizzes via VLE (LO1,2,4)	Approximately 15 minutes per exercise	N/A

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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