

Module Specification

Module Summary Information

1	Module Title	Introduction to Human Physiology
2	Module Credits	20
3	Module Level	4
4	Module Code	BMS4004

5	Module Overview
<p>Rationale: This module is delivered in the second semester of your journey on the Biomedical Sciences programme and will provide you with the essential knowledge and understanding of human physiological systems. You will start with the fundamentals of homeostasis and gradually work towards exploring the physiological and scientific principles of organ systems. Theory and practice will be linked throughout by use of clinical examples to import the significance and relevance of the topics covered.</p>	
<p>Alignment with programme philosophy and aims: This module aims to equip you with current and relevant knowledge of human physiological systems and some insight into related pathophysiology. Through active participation, and a diverse portfolio of teaching methods, you will gain understanding and insight essential for the modern day scientist. Engagement with pre and post session activities will aid and consolidate with development of key transferable skills such as critical thinking, analysis, communication and presenting skills.</p>	
<p>Learning and Teaching Strategy: The module will look to develop you as an effective independent learner. A variety of teaching methods will be used to deliver subject content in an innovative way and ensure learning. There will also be many opportunities for you to undertake group work and collective learning with your peers. The module will have its own Moodle page which you will have access to. This page will contain resources that are specific to the module such as lecture notes; supporting materials; assessment details and important notices. Accessing this site regularly as part of your learning will allow you to undertake weekly preparatory activities for each session followed by other activities such as short quizzes to consolidate the theory and help with your learning.</p>	
<p>Assessment Strategy: There will be three assessments: a mini lab report, where you will submit answers to questions and tasks set in the laboratory practical; and two exams consisting of multiple choice questions and short answer questions that will test the module content.</p>	

6	Indicative Content
	Introduction to physiology: Cells and tissues, organ systems, homeostasis and feedback control.
	Physiological control and integration: Nervous system: organisation, function, neurones and supporting cells; electrical activity in axons; synaptic transmission; neurotransmitters. Endocrine system: hormones, classification, functions and modes of action; control of hormone secretion; autocrine and paracrine regulation.
	Circulatory system: Components of the circulatory system; blood composition, haemostasis and coagulation. Structure and function of the heart and blood vessels.
	Respiratory system: Organisation and mechanisms of the respiratory system; gas exchange and transport; control of respiration.
	Digestive system: Structure and function of the gastrointestinal system. Processes of digestion and absorption of nutrients. Control of gastrointestinal secretions and motility. Role of liver in detoxification.
	Excretory system: Structure and functions of the kidney. Urine formation, maintenance of electrolyte and extracellular fluid balance.
	Reproductive system: Male and female reproductive systems; endocrine regulation of reproduction; menstrual cycle, fertilization.

7	Module Learning Outcomes
On successful completion of the module, students will be able to:	
1	Identify the structure and function of human physiological systems.
2	Explain the interrelationships between organ systems.
3	Explain the principles of homeostasis.

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1	yes	yes	
1,2,3		yes	

9	Breakdown Learning and Teaching Activities
Learning Activities	Hours
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable	41
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE	40
Private Study (PS) includes preparation for exams	119
Total Study Hours:	200