

Liverpool John Moores University

Title: ANATOMY, PHYSIOLOGY AND GENETICS
Status: Definitive
Code: **4105BMBMOL** (122377)
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
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Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 57
Total Learning Hours: 200 **Private Study:** 143

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	31
Practical	12
Workshop	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Practice	Practical	Collection and interpretation of laboratory data	50	
Exam	Exam	A combination of MCQ and short answer questions	50	2

Aims

To provide an introduction to the major anatomical and physiological systems which underpin the study of Biomedical Science and an introduction to the study of human genetics.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe the structure and functions of the cardiovascular, respiratory, digestive, renal and musculoskeletal systems.
- 2 Collect, interpret and present physiological and genetic data.
- 3 Describe Mendelian and non-Mendelian inheritance in humans.
- 4 Recognise the integrated nature of human physiological systems and their importance in homeostasis.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Practical class with assessment	1	2	3
Exam	1	3	4

Outline Syllabus

The cardiovascular system: Introduction to the functions and components of blood, anatomy of the heart, structure and function of blood vessels.

The respiratory system: Anatomy of the lungs, pulmonary ventilation, lung volumes and capacities

The digestive system: Anatomy of the gastrointestinal tract (mouth, oesophagus, stomach, small intestine, pancreas, liver and large intestine). Digestion and absorption.

The renal system: Anatomy of the kidney, functions of the kidney, glomerular filtration, tubular reabsorption, concentration of urine.

The musculoskeletal system: Anatomy of muscle and bone, skeletal muscle, movement (bones and muscles around joints), smooth muscle.

Genetics: Mendelian genetics, principles of inheritance, structure and function of genes, human variation, evolution and population biology.

Learning Activities

Lectures, practical classes and workshops

Notes

The module will provide an introduction to the aspects of anatomy, physiology and genetics which underpin further study of Biomedical Science. Material delivered in lectures will be supported with practical classes relating to physiology and genetics.

No specific benchmarks are available for this module, but the learning outcomes at least meet, if not exceed, those stipulated in the relevant qualification descriptors for a higher education qualification at level 4 as defined by QAA, Sept 2015. The module has also been informed by the benchmark statement for Biomedical Science June 2015.

Intake is every September.

The criteria for admission to the module require that candidates meet the criteria for admission to the BSc Biomedical Science programme (32805).

The final award is Certificate of Professional Development in Anatomy, Physiology and Genetics, 20 credits at Level 4.

The students have access to a module Blackboard site and the University's other range of electronic support such as access to the electronic library facilities. The module content is regularly updated on the Blackboard site including contemporary reading lists and links to journal articles. Students have access to the community site for Biomedical Science. All students have access to the module leader through phone contact and email. Module and CPD guides are also provided, which provide a range of information.

The programme is assessed and run in line with the Academic Framework
<http://www.ljmu.ac.uk/eaqs/121984.htm>

The module is accredited by The Institute for Biomedical Science (Sept 2016- Aug 2021). The module forms part of the BSc Biomedical Science programme (32805) which was reviewed in April 2016.

The methods for improving the quality and standards of learning are as follows:

- Annual monitoring Review;
- Liaison and feedback from the students;
- Reports from External Examiner;
- Programme team ensuring the module reflects the values of the current teaching and learning strategy;
- Module leader updating knowledge and skills to ensure these remain current and relevant.

The module is included in the programme specification for the BSc Biomedical Science programme (32805). The module is aligned with the same BSc Biomedical Science module for annual monitoring and external examining purposes.