Module Definition Form (MDF)

Module code: MOD008108	**Version:** 3 **Date Amended:** 17/10/2024

1. Module Title

Biology: Physiology

2a. Faculty Leader

Chinchu Babu

2b. School

SE: ARU College

2c. Faculty

Faculty of Science and Engineering

3a. Level

3

3b. Module Type

Standard (fine graded)

4a. Credits

15

4b. Study Hours

150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

In this module, you will study the science of body function and its relation to the structure, or anatomy, or the organism (physiology). You will learn how the main organ and regulatory systems work to enable the body to function and respond to change, whilst maintaining a constant internal environment. Although you will mainly focus on the human body as an example of a frequently studied organism in this module, reference to other organisms will be made to illustrate particular principles or to contrast different systems and mechanisms.

You will study the structure and function of the major organ systems, including the cardiovascular, respiratory, gastrointestinal, musculoskeletal, nervous, endocrine, reproductive, and immune systems. To function, the human body is required to maintain its internal environment within narrow limits. You will investigate the homeostatic mechanisms needed to maintain homeostasis and you will examine how they respond to differing conditions, with particular emphasis on thermoregulation and osmoregulation. Examples of negative feedback will be used throughout the course to illustrate the importance of how homeostasis is maintained.

You will also be introduced to classification and the basic principles of genetic inheritance and consider this in the context of Darwin's theory of natural selection.

6b. Outline Content

Homeostasis and regulatory systems: the functions and mechanisms of the transport systems, thermoregulation, and osmoregulation to maintain homeostasis.

Organ systems: the structure and function of the cardiovascular, respiratory, gastrointestinal, musculoskeletal, nervous, endocrine and immune systems.

Classification of organisms - major micro-organism, plant and animal phyla

Genetics: Mendelian inheritance.

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Labster – virtual learning environment creating simulations of laboratory procedures.

Laboratory

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Describe and explain the structure and function of specific organ systems in relation to mechanisms required to maintain homeostasis in mammals.
2	Knowledge and Understanding	Define and describe the principles of basic Mendelian genetics and apply them to genetic inheritance.
3	Intellectual, practical, affective and transferrable skills	Develop autonomy, self-evaluation and skills in using a range of learning resources.
4	Intellectual, practical, affective and transferrable skills	Demonstrate skills in retrieving peer reviewed scientific information and the use of citations and referencing in reports.

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2023/4	F01CAM	Trimester 2	ARU Cambridge Campus	Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	0	NA	NA
Other teacher managed learning	48	1-4	4 hours per week x 12 teaching weeks
Student managed learning	102	1-4	Pre and post session preparation, reading and research. Other tasks as detailed in Module guide
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	1 2 3 4	60 (%)	Fine Grade	30 (%)
Poster (1000 words equivalent)					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Coursework	1 2 3	40 (%)	Fine Grade	30 (%)
In-class Test (up to 1.5 hours)					

In order to pass this module, students are required to achieve an overall mark of 40%.
In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment of as specified above
(b) pass any pass/fail elements