

BMS2005: HUMAN PHYSIOLOGY

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Human Physiology

Subject Code

BMS - Biomedical Sciences

Course Number

2005

Academic Unit

Biomedical Sciences (BMS)

College/School

Jockey Club College of Veterinary Medicine and Life Sciences (VM)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

Human physiology is the study of the human body's function - from molecules to the system and from cells to the whole body. This course is an introductory level course in human physiology which covers a broad base of basic knowledge. The

course provides up-to-date knowledge of characteristics and regulatory mechanisms of human body's systems including locomotion, nervous, circulatory, respiratory, osmoregulatory, immune, endocrine, reproduction and digestive systems. The course intends to connect molecular and cellular pathways with physiological conditions of the organs and the whole body. Selected animal model organisms will also be mentioned. The goal of the course is to let the students understand the biochemical and physiological principles of the human body. In addition physiological conditions greatly influence the health of an individual. This course also aims to train the students to relate human physiologic principles to clinical problems.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the characteristics of human organs and organ systems.	20			
2	Describe the regulatory mechanisms of major systems of human body.	20			
3	Define homeostasis and illustrate the importance of feedback loops in the function of organ systems.	20			
4	Recognize molecular and cellular pathways that underlie physiological principles.	20	x		
5	Relate disease processes to the aberrations of normal physiological function.	20		x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Teaching and learning will be delivered mainly in lectures.	1, 2, 3, 4, 5
2	Tutorials	A forum for problem solving by applying the knowledge learned from the lectures.	1, 2, 3, 4, 5
3	Essay	Students explore an advanced topic on human physiology by themselves.	1, 2, 3, 4, 5

4	Group presentations	Students will be divided into groups and each group will present a topic on a human disease related to abnormal physiological regulation.	5	
5	Mid-term quiz	A short test to evaluate the students' learning outcome.	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Essay	1, 2, 3, 4, 5	15
2	Group presentation	5	15
3	Mid-term quiz	1, 2, 3, 4, 5	10

Continuous Assessment (%)

40

Examination (%)

60

Additional Information for ATs

Minimum Passing Requirement :

A minimum of 40% in coursework as well as in examination.

Assessment Rubrics (AR)**Assessment Task**

1. Assignment

Criterion

The number of correct answers and the quality of the answer.

Excellent (A+, A, A-)

Accurately answered all the questions. Well organised text and coherent logic.

Good (B+, B, B-)

Correctly answered >80% of the questions.

Fair (C+, C, C-)

Correctly answered 60% to 80% of the questions.

Marginal (D)

Correctly answered 40% to 60% of the questions.

Failure (F)

Did not hand in the assignment on time. Or correctly answered < 40% of the questions.

Assessment Task

2. Essay

Criterion

The content and the logic of the essay.

Excellent (A+, A, A-)

Subject is well researched and the content is well organised. The writing is logical and coherent.

Good (B+, B, B-)

The content is substantial. The writing is logical and coherent.

Fair (C+, C, C-)

The content is sufficient. The writing is easy to understand.

Marginal (D)

The content is correctly presented but lacks details. The writing is not easy to understand.

Failure (F)

Did not hand in the essay on time. Or the subject is poorly researched.

Assessment Task

3. Group presentation

Criterion

The content and the style of the presentation. Handling of questions.

Excellent (A+, A, A-)

Correct questions > 90%.

Good (B+, B, B-)

Correct questions between 75% and 90%.

Fair (C+, C, C-)

Correct questions between 60% and 75%.

Marginal (D)

Correct questions between 50% and 60%.

Failure (F)

Correct questions < 50%.

Assessment Task

4. Mid-term quiz

Criterion

The number of correct answers.

Excellent (A+, A, A-)

Accurately answered all the questions. Well organised text and coherent logic.

Good (B+, B, B-)

Correctly answered >80% of the questions.

Fair (C+, C, C-)

Correctly answered 60% to 80% of the questions.

Marginal (D)

Correctly answered 40% to 60% of the questions.

Failure (F)

Did not hand in the assignment on time. Or correctly answered < 40% of the questions.

Part III Other Information

Keyword Syllabus

- The terminology and basic principles of human organs
- The functions and regulations of human organs
- Locomotion, nervous, circulatory, respiratory, osmoregulatory, immune, endocrine, reproduction and digestive systems
- Physiological control mechanisms and homeostasis
- Disease processes and abnormal physiological functions

Reading List

Compulsory Readings

Title	
1	Human Physiology: An Integrated Approach 6th edition, by Dee Unglaub Silverthorn, Pearson, 2012.

Additional Readings

Title	
1	Human Physiology, by Stuart Fox, McGraw-Hill, 2012.
2	Principles of Animal Physiology 2nd Edition, by Christopher D. Moyes and Patricia M. Schulte, Pearson, 2007.