

AHST109 Basic Physiology

1- Basic Information

Course Title	Basic Physiology				
Course Code	109 AHST				
Department(s) responsible for course teaching.	Medical Laboratory Technology department				
Course hours	Credit hrs.	Contact			
		Lec	Tut	Lab	Total
	3	1		2	3
Course type	Compulsory				
Course level	First level, Second Semester				
Academic program	Foundation year				
Faculty	High Institute of Applied Health Science Badr				
University	Badr Higher Institutes of Science and Technology				
Course coordinator	Dr Rania Karas				
Course approval date	Click or tap to enter a date.				
Decision approving board (attached the decision/minutes of the department council)					



2- Course Overview

This course introduces students to the foundational principles of human physiology, focusing on the function and regulation of cells, tissues, organs, and systems. It emphasizes the integration of physiological mechanisms and prepares students for advanced studies in applied health sciences.

3- Course Learning Outcomes

Consistency of course learning outcomes with program outcomes (adopted standards)

Program Outcomes/Adopted Academic Reference Standards (PO Target by the course based on matrix)		Course Learning Outcome By the end of this course the student will be able to:	
Statement	Code	Statement	Code
Understand basic applied health sciences		Describe the structure and function of the cell membrane and transport mechanisms.	CLO
		Explain the physiological mechanisms of respiration, hearing, and vision.	CLO
		Understand the role of the nervous and muscular systems in body function and coordination.	CLO
		Discuss how blood components contribute to homeostasis and immunity.	CLO
		Outline the renal system's role in fluid, electrolyte, and acid-base balance.	CLO
		Explain the cardiovascular system's structure, cardiac cycle, and blood circulation	CLO
		Describe the functions and hormonal control of the endocrine system.	CLO
		Identify the physiological basis of cell communication and signal transduction pathways.	CLO
		Analyze and interpret physiological mechanisms in	CLO

Program Outcomes/Adopted Academic Reference Standards (PO Target by the course based on matrix)		Course Learning Outcome By the end of this course the student will be able to:	
Statement	Code	Statement	Code
		relation to homeostasis and system integration.	
		Compare and contrast normal physiological processes with common dysfunctions (e.g., anemia, hypertension, diabetes).	CLO
		Integrate knowledge across systems to understand the interdependence of body functions (e.g., renal-cardiovascular interaction).	CLO
Work safely & perform practical techniques		Perform basic physiological experiments	CLO
		Practice proper lab safety and use of basic laboratory instruments.	CLO
Communicate effectively & collaborate		Communicate scientific information clearly in written and oral forms.	CLO
Communicate effectively & collaborate		Work effectively in groups.	CLO

4- Learning Methods

- Interactive lectures
- Small group discussion / Brainstorming
- Flipped Classroom
- Practical tutorial session

5- Course Timetable

Week No.	Course Content/Topics	Total Weekly hours	Expected learning hours (contact hours)		
			نظري	تمارين	عملي
1	Introduction & cell function	3	1		2
2	Cell membrane	3	1		2
3	Cellular transport (passive and active transport)	3	1		2

4	physiology of respiration	3	1		2
5	Hearing	3	1		2
6	Vision	3	1		2
7	Midterm exam	3	1		2
8	nerve and muscles	3	1		2
9	Cell communication	3	1		2
10	Physiology of blood	3	1		2
11	Renal Physiology	3	1		2
12	Cardiovascular System	3	1		2
13	Cardiovascular System	3	1		2
14	Endocrine System	3	1		2
15	Endocrine System	3	1		2
16	Practical exam	3	1		2
17	Final exam	3	1		2

6- Student Assessment Methods

No .	Assessment method*	Assessment time (Week No.)	Rating Scores	Percentage of the total course grade
1	Midterm exam and activities	7 th	30	20%
2	Final written exam	15 th	75	50%
3	Final Practical exam	14 th	45	30%
8	Other (list)	Weekly formative assessment	---	----

* The methods mentioned above are indicative examples, and may add and delete

7- Learning Sources and Facilities

Learning resources (books, scientific references, etc.) *	Main Reference	Authors, <i>The Book Title</i> . Publisher, Edition, Year.
	Other references	Hall, J. E., & Guyton, A. C. (2021). <i>Guyton and Hall Textbook of Medical Physiology</i> (14th ed.). Elsevier. Costanzo, L. S. (2021). <i>Physiology</i> (7th ed.). Elsevier.
	Electronic Resources	https://www.educate.elsevier.com/book/details/9780323597128

	(Add the link)	
	Educational Platform (add the link)	
	Other (List)	
Educational support equipment for teaching and learning *	Devices	ECG-Spirometer-Light microscope-Sphygmomanometer-Stethoscope- urometer
	Supplies	Glassware-Slides and cover slips-Buffers and reagents- different types of tubes-urinalysis strips.
	Software	
	Skills Labs/Simulators	
	Virtual Labs	
	Other (List)	

* The mentioned list is indicative examples, and the institution may add and delete depending on the nature of the course.

Course Coordinator
Name: Dr Rania Karas

Signature: 

Program Coordinator
Name:
Signature: