Specification for Physiology (C)

2025/2026

1-Basic information

Course title	**Physiology (C)**							
Course code	PHY.212							
Department/s participating in delivery of the course	Physiology							
Number of units/credit hours	Theoretical	1	Practical	1(2)	Other	0	Total	2(3)
Course Type	√ **Obligatory** **Elective**							
Academic level at which the course is taught	Second year							
Semester	fall semester							
Academic program	Bachelor of Veterinary Medicine (BVM)							
Faculty	Veterinary medicine							
University	Benha University							
Name of course coordinator	Prof. Dr. Abeer Abdel Aleem							
Course Specification Approval Date	Faculty council 27-8-2025							
Course Specification Approval (Attach the decision/minutes of the department /committee/council ....)	Department council/							

2-Course overview

- **Course contents written in the program bylaw:**
  Physiology of cardiovascular system, physiology of endocrine system and physiology of CNS.

3- Course Learning Outcomes CLOs

	(NARS) outcomes		Course outcomes	
	Code	**Text**	**Code**	**Text**

Knowledge and understanding	2.4	Physiological and biochemical bases of different organ functions, metabolic processes and homeostasis	a1	Identify the different endocrine organs, hormones and their mechanism of action
			a2	Mention the function of cardiovascular system and realize the different properties of cardiac muscle
			a3	Summarize the mechanism by which CNS and ANS work
			a4	Identify reflex arc, reflex action and different type of reflexes
Intellectual skills	4.1	Foster critical thinking and scientific curiosity	b1	Correlate the hormonal function and certain types of production
			b2	Imply the mechanism of cardiovascular system parameters
			b3	Discuss the integrated function of the CNS and autonomic nervous systems
Professional and practical skills	3.4	Perform clinical examination of diseased cases and collect relevant samples.	c1	Perform dissection of the frog's heart to understand and study properties of cardiac muscles.
			c2	Measure the blood pressure and pulse rate
			c3	investigate endocrine hormonal action
			c4	Determine the reflex action of nerves
	D			
General and transferable skills	5.2	Function in a multidisciplinary team.	d1	Self-learning during lecture
	5.4	Organize and control	d2	Manipulate and organize

		tasks and resources		tasks
	5.5	Search for new information and technology as well as adopt life–long self learning ethics.	d3	Search for new information and technology
	5.6	Utilize computer and internet skills	d4	Utilize computer and internet skills

4- Teaching and learning methods					
Lectures	√	Discussion & seminar	√	Practical	√
Presentation & movies	√	Problem solving	√	Brain storming	√
Others					

- Course Schedule:

Number of the Week	**Scientific content of the course (Course Topics)**	**Total Weekly Hours**		**Expected number of the Learning Hours**		
			Theoretical teaching (lectures /discussion groups/ .....)	**Training (Practical/ Clinical/ .....)**	**Self-learning (Tasks/ Assignments/ Projects/ ...)**	**Other (to be determined)**
W1	Physiology of the Autonomic Nervous System1	2(3)	**1**	1(2)		**0**
W2	Physiology of the Autonomic Nervous System2	2(3)	**1**	1(2)		**0**
W3	Physiology of the Autonomic Nervous System3	2(3)	**1**	1(2)	**Formative quiz**	**0**
W4	Physiology of the Autonomic Nervous System4	2(3)	**1**	1(2)		**0**

W5	Physiology of the Central Nervous System1	2(3)	**1**	1(2)		**0**
W6	Physiology of the Central Nervous System2	2(3)	**1**	1(2)	**Formative quiz**	**0**
W7	Semester work including 1hr exam	----------				
W8	Physiology of the Central Nervous System3	2(3)	**1**	1(2)		**0**
W9	Physiology of the Cardiovascular System1	2(3)	**2**	1(2)		**0**
W10	Physiology of the Cardiovascular System2	2(3)	**1**	1(2)	**Formative quiz**	**0**
W11	Physiology of the Cardiovascular System3	2(3)	**1**	1(2)		**0**
W12	Physiology of the Endocrine System1	2(3)	**1**	1(2)		**0**
W13	Physiology of the Endocrine System2	2(3)	**1**	1(2)		**0**
W14	Physiology of the Endocrine System3	2(3)	**1**	1(2)	**Formative quiz**	**0**
W15	Practical exam	----------				

5- Methods of students' assessment

a- Assessment methods (summative and formative)

1. **Formative assessment**: including (weekly quizzes, homework assignments and surveys).
2. **Summative assessment** including (quizzes, class activities, 1hr exam, practical exam, oral exams and final written exams).

b- Assessment schedule and weight

Assessment method	**Assessment Timing (Week Number)**	**Marks/ Scores**	Percent Percentage of total course Marks
Semester work (1hr exam)	7th week	10	10%
Formative assessment	Throughout the	--------	---------

	semester		
Practical exam	15th week	30	30%
oral exam	End of semester	10	10%
Written exam	End of semester	50	50%
Assignments / Project /Portfolio/ Logbook	--------	-------	-------
Field training	--------	----------	-------
Other (Mention)	-------	--------	-------
Total		100	100%

6- Learning resources and supportive facilities:

Learning resources	**Main reference**	**Student handbook:** Veterinary Physiology, Edited by physiology staff members
	Essential books (text books)	• Larry R. Engelking (2015) Textbook of veterinary physiological chemistry • J. W. Harvey (2012) Veterinary hematology • David R. Gross (2009) Animal models in cardiovascular research • Ruchebusch,Y., Phaneuf, l. and Dunlop,R (1991) Physiology of small and large Animals. B.C.Decker ,Inc, Philadelphia, Hamiloton • Course note. • David R. Gross (2009) Animal models in cardiovascular research
	Periodicals, Web sites, . . . etc	• **www.ekb.eg**
	Learning platform	Thinqi
supportive facilities	**Devices & instruments**	**Devices** ○ Kymograph ○ Sphygmomanometer ○ ECG **Instruments** ○ Stethoscope ○ pithing needle

		○ Data show. ○ White board ○ Physiology laboratory.

Matrices:

A- Content and ILOs matrix:

Topic	A) Knowledge and understanding	B) Intellectual skills	C) Professional and practical skills	D) General and transferable skills
Physiology of the Autonomic Nervous System	a3,a4	b3	c4	d1 to d4
Physiology of the Central Nervous System	a3,a4	b3	c4	d1 to d4
Physiology of the Cardiovascular System	a2	b2	c1,c2	d1 to d4
Physiology of the Endocrine System	a1	b1	c3	d1 to d4

B- Teaching and learning methods and ILOs matrix:

ILOs		Teaching and Learning method					
		L	P&M	D&S	P	Ps	Bs
Knowledge and understanding	a1	√					
	a2	√					
	a3	√					
	a4	√					

Intellectual skills	b1			√			
	b2			√			
	b3			√			
Professional and practical skills	c1				√		
	c2				√		
	c3				√		
	c4				√		
General skills	d1			√			√
	d2	√	√	√		√	√
	d3	√	√	√		√	√
	d4	√	√	√		√	√

L **:Lecture,** P&M**: Presentations & Movies,** D&S: **Discussions & Seminars P: Practical** Ps: **Problem solving,** Bs: **Brain storming**

C- Assessment methods and ILOs matrix:

ILOs		assessment method				
		formative	Semester 1hr exam	Oral	practical	written
Knowledge and understanding	a1		√	√		√
	a2		√	√		√
	a3		√	√		√
	a4		√	√		√
Intellectual skills	b1	√	√	√		√
	b2	√	√	√		√
	b3	√	√	√		√
Professional and practical skills	c1				√	
	c2				√	
	c3				√	
	c4				√	√
General skills	d1	√		√		
	d2	√		√		
	d3	√		√		
	d4			√		

-Course coordinator:

Prof. Dr. Abeer Abdel Aleem

-Program coordinator: Prof. Dr. Mahmoud Abouelroos