Specification for Physiology course

2025/2026

1-Basic information

Course title	Physiology (B)							
Course code	PHY.125							
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	1st year							
Semester	Spring 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/ 8/7/2025							

2-Course overview

- **Course contents written in the program bylaw:**
  Muscles and nerves physiology, physiology of urinary system and physiology of energy metabolism

3- Course Learning Outcomes CLOs

	(NARS)	**Course ILOS**	

	Code	Content	Code	Content
Knowledge and understanding	2.4	Physiological and biochemical bases of different organ functions, metabolic processes and homeostasis.	a1	Define resting membrane potential
			a2	Identify the role resting membrane potential in excitation of nerves and muscles
			a3	Describe the mechanism of muscle contraction and the factors affecting muscle contraction
			a4	Describe the urinary system and their function
			a5	Identify the mechanism of acid – base balance
			a6	Define the body temperature and factors affecting it
			a7	Define the body metabolism
			a8	List the factors affecting body metabolism
Intellectual skills	4.1	Foster critical thinking and scientific curiosity.	b1	Correlate the muscle-nerve function and dysfunction
			b2	Imply dysfunction related to urinary system

			b3	Detect variation in body temperature
			b4	Conclude how the animals acclimatized to the different environments
Professional and practical skills	3.4	Perform clinical examination of diseased cases and collect relevant samples.	c1	Draw different curves of muscle contraction using the kymograph.
			c2	Calculate glomerular filtration rate and other kidney tests
			c3	Measure the body temperature
			c4	Measure the metabolic rate of different animals
General and transferable skills	5.2	Function in a multidisciplinary team.	d1	Self-learning during biochemistry lecture
	5.4	Organize and control tasks and resources.	d2	Manipulate and organize tasks
	5.5	Search for new information and technology as well as adopting life–long self- learning.	d3	Search for new information about physiology
	5.6	Utilize computer and internet skills.	d4	Utilize computer and internet skills, read paper via internet physiology

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

- Course Schedule:

Week [W]	Topics	Theoretical	Laboratory [practical]	Others	Total
W1	Muscle1	**1**	**1(2)**	**0**	**2(3)**
W2	Muscle2	**1**	**1(2)**	**0**	**2(3)**
W3	Nerve1	**1**	**1(2)**	**0**	**2(3)**
W4	Nerve2	**1**	**1(2)**	**0**	**2(3)**
W5	Urinary system1	**1**	**1(2)**	**0**	**2(3)**
W6	Urinary system1	**1**	**1(2)**	**0**	**2(3)**
W7	Semester work (one hour exam)	----------			
W8	Acid base balance	**1**	**2(4)**	**0**	**3(5)**
W9	Body temperature1	**2**	**2(4)**	**0**	**3(5)**
W10	Body temperature2	**1**	**1(2)**	**0**	**2(3)**
W11	Body temperature3	**1**	**1(2)**	**0**	**2(3)**
W12	General metabolism1	**1**	**1(2)**	**0**	**2(3)**
W13	General metabolism2	**1**	**1(2)**	**0**	**2(3)**
W14	General metabolism3	**1**	**1(2)**	**0**	**2(3)**

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, semester work, 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 including one hour exam	7th week	10	10%
Formative assessment	Through 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 Laboratory physiology, Edited by Staff members
		• L. R. Engelking (2015) Textbook of veterinary physiological chemistry • Cl Ghai Mbbs Md (2007) a Text book of practical physiology • Guyton, A. (1991) Text book of Medical physiology. 8th, W.B. Saundero

	Essential books (text books)	Company. • Course note.. • L. R. Engelking (2015) Textbook of veterinary physiological chemistry Guyton, A. (1991) Text book of Medical physiology. 8th, W.B. Saundero Company.
	Periodicals, Web sites, . . . etc	• www.ekb.eg
	Learning platform	Thinqi
supportive facilities	Devices & instruments	Devices Kymograph Microscope Instruments dissecting plate pithing needle Dissection Equipment
		1. Data show 2. White board 3. 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
Muscle & nerve	a1, a2,a3	b1	c1	d1 to d4
Urinary system and acid base balance	a4,a5	b2,	c2	d1 to d4
Body	a6	b3	c3	d1 to d4

temperature				
General metabolism	a7,a8	b4	c4	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	√					
	a5	√					
	a6	√					
	a7	√					
	a8	√					
Intellectual skills	b1	√	√	√			
	b2	√	√	√			
	b3	√		√			
	b4	√		√			
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 assessment	Semester work	oral	practical	Written
and understand	a1		√	√		√
	a2		√	√		√
	a3		√	√		√
	a4		√	√		√

	a5		√	√		√
	a6		√	√		√
	a7		√	√		√
	a8		√	√		√
Intellectua skills	b1	√	√	√		√
	b2	√	√	√		√
	b3		√	√		√
	b4		√	√		√
al and practical	c1				√	
	c2				√	
	c3				√	
	C4				√	
General skills	d1	√				
	d2	√		√		
	d3	√		√		
	d4					

-Course coordinator:

Prof. Dr. Abeer Abdel Aleem

-Program coordinator: Prof. Dr. Mahmoud Abouelroos