

## Specification for Physiology course 2019/2020

### A-Affiliation

1.	Relevant program	Bachelor of Veterinary Medical Sciences (BVMSc)
2.	Department offering the course	Physiology

**Date of specification approval:** ministerial decree No. 1727 on 26/4/2017  
(Approved in this template by the department council on 1/10/2019)

### B-Basic information

1.	Course title	Physiology
2.	Course code	115(B) II
3.	Level	1 <sup>st</sup> year
4.	Semester	Second semester
5.	Total hours	3
6.	Lecture hours	1
7.	Practical hours	2

### C-Professional Information

#### 1- Course learning objectives

The course provides the students with the basic knowledge about the physiology of muscles, nerves, urinary system, general metabolism and body temperature

#### 2- Intended learning outcomes of the course (ILOs):

##### a- Knowledge and understanding

After successful completion of the course the students should be able to:

- a1- Define resting membrane potential
- a2- Mention the role resting membrane potential in excitation of nerves and muscles
- a3- Identify 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

##### b- Intellectual skills

After successful completion of the course the students should be able to:

- b1- Correlate the muscle-nerve function and dysfunction
- b2- Imply dysfunction related to urinary system

b3-Discuss variation in body temperature

b4- Conclude how the animals acclimatized to the different environments

### c- Professional and practical skills

After successful completion of the course the students should be able to:

c1- draw different curves of muscle contraction using the kymograph.

c2- calculate glomerular filtration rate and other kidney tests

c.3 Measure the body temperature

c.4- Measure the metabolic rate of different animals

### d- General and transferable skills

After successful completion of the course the students should have the following skills

d1- Team working skills

d2- Research skills

d3- Report writing skills

### 3- Course contribution in the program ILOs:

Course ILOS	Program ILOS
A Knowledge and understanding	a <sup>4</sup>
B Intellectual skills	b <sup>1</sup>
C Professional and practical skills	c <sup>4</sup>
D General and transferable skills	d <sup>1,6</sup>

#### 3.1- Course contents:

Topic	Lecture hours	Practical hours
Muscle & nerve	4	8
Urinary system and acid base balance	4	8
Body temperature	4	8
General metabolism	3	6
<b>Total hours</b>	<b>15</b>	<b>30</b>

The midterm and practical exams are included during the semester

#### 3.2- 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 temperature	a6	b3	c3	d1 to d4
General metabolism	a7,a8	b4	c4	d1 to d4

#### 4- Teaching and learning and assessment methods:

ILOs	Teaching and	assessment method
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		Learning method										
		L	P&M	D&S	P	Ps	Bs	semester	midterm	oral	practical	written
Knowledge and understanding	a1	x	x	x	x	x	x	x	x	x	0	x
	a2	x	x	x	x	x	x	x	x	x	0	x
	a3	x	x	x	x	x	x	x	x	x	0	x
	a4	x	x	x	x	x	x	x	0	x	0	x
	a5	x	x	x	x	x	x	x	0	x	0	x
	a6	x	x	x	x	x	x	x	0	x	0	x
	a7	x	x	x	x	x	x	x	0	x	0	x
	a8	x	x	x	x	x	x	x	0	x	0	x
Intellectual skills	b1	x	x	x	x	x	x	x	x	x	0	x
	b2	x	x	x	x	x	x	x	x	x	0	x
	b3	x	x	x	x	x	x	x	0	x	0	x
	b4	x	x	x	x	x	x	x	0	x	0	x
Practical	c1	0	x	x	x	x	x	x	0	x	x	0
	c2	0	x	x	x	x	x	x	0	x	x	0
	c3	0	x	x	x	x	x	x	0	x	x	0
	C4	0	x	x	x	x	x	x	0	x	x	0
General skills	d1	x	x	0	x	x	0	x	0	x	0	0
	d2	0	x	x	0	0	x	x	0	x	0	x
	d3	0	0	0	x	0	0	x	0	x	x	0

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

### 5- Assessment timing and grading:

Assessment method	timing	grade
Mid-term exam	6 <sup>th</sup> week	15
Practical exam	14 <sup>th</sup> week	20
oral exam	End of semester	15
Written exam	End of semester	50
total		100

### 6- List of references

#### 6.1- Course notes:

Veterinary Physiology, Edited by physiology staff members

#### 6.2- Essential books (text books)

- 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 Company.

#### 6.3- Recommended books

- Course note..
- L. R. Engelking (2015) Textbook of veterinary physiological chemistry
- Guyton, A. (1991) Text book of Medical physiology. 8th, W.B. Saundero Company.

#### 6.4- Periodicals, Web sites, . . . etc

- [www.ekb.eg](http://www.ekb.eg)

#### 7- Facilities required for teaching and learning

1. Data show.
2. White board
3. Kymographs...
4. Microscopes.
5. ECG

Course coordinator: Prof. Dr. Randa Ismail.

Head of department Prof. Dr. Randa Ismail

Signature .....

Date 1/10/2019

