

PHYSIOLOGY I

1	Course Title:	PHYSIOLOGY I
2	Course Code:	VET1009
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	none
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. FAHRÜNİSA CENGİZ
15	Course Lecturers:	Prof. Dr. Fahrünisa CENGİZ Prof. Dr. Nurten GALİP Prof. Dr. Cenk AYDIN Doç. Dr. Murat YALÇIN Yrd. Doç. Dr. Füsün AK SONAT
16	Contact information of the Course Coordinator:	fnisa@uludag.edu.tr +90 224 294 1271 Uludağ Üniv. Veteriner Fak. Fiziyojji Anabilim Dalı Bursa Turkey 16059
17	Website:	
18	Objective of the Course:	Physiological concepts and cell physiology. Body fluids and buffer systems. Blood physiology. Nerve and muscle physiology
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	General physiological concepts
	2	Cell organelles and physiology
	3	Body fluids
	4	Buffer systems and their working process
	5	General blood physiology
	6	Red blood cells and their role
	7	White blood cells and their role
	8	Thrombocyte and coagulation
	9	Nerve physiology

		10	Muscle physiology		
21	Course Content:				
	Course Content:				
Week	Theoretical		Practice		
1	Introduction of Physiology, basic concepts in physiology, diffusion, facilitated diffusion, active transport, osmosis and osmotic pressure, determination of osmotic pressure, osmolality, suspension, emulsion, imbibitions, pinocytosis and phagocytosis terms		Introduction of the laboratory equipments.		
2	Cell physiology, protoplasm, water and salts, proteins, lipids, carbohydrate, nucleic acids, DNA, RNA, rRNA, tRNA, mRNA, nucleus, sex chromatin, endoplasmic reticulum, golgi apparatus, ribosomes, lysosomes, mitochondria, peroxisome, centrosome, plastids, vacuole, cell membrane.		Hematocrit and determination of hemoglobin.		
3	Body fluids and tissues, fluid compartments of body, composition of body fluids, bicarbonate, phosphate, protein and hemoglobin buffer systems.		Counting erythrocytes.		
4	Blood physiology, production of erythrocyte, anemias, blood cells, plasma, serum, anticoagulants, hemorrhage and Vit. K correlation, erythrocyte production, regulation of erythrocyte numbers, erythrocyte counts,		Counting leukocytes		
Activities			Number	Duration (hour)	Total Work Load (hour)
Theoretical			44	2.00	28.00
Practicals/Labs			14	2.00	28.00
Self study and preparation			0	0.00	0.00
Homeworks			0	0.00	0.00
Projects			0	0.00	0.00
Field Studies			0	0.00	0.00
Midterm exams			1	17.00	17.00
Others			0	0.00	0.00
Final Exams			1	17.00	17.00
Total Work Load					90.00
Total work load/30 hr					3.00
ECTS Credit of the Course					3.00
10	Visceral smooth muscle, vascular smooth muscle, muscle contraction, muscle metabolism		Erythrocyte osmotic fragility test, experimental hemolysis in erythrocytes.		
11	Nervous system, neuron, the conduction of action potential along membrane, classification and characteristics of nerve fibre		Neuromuscular applications.		
12	Degeneration and regeneration of nerves, synapses, inhibiting and stimulating synapses, neurotransmitters		Examination of reflexes in decerebrated frog.		

13	Structure of spinal cord, spinal cord reflex mechanism, nuclei of the brain stem, medulla pons and midbrain functions, brain stem reticular formation, thalamus, hypothalamus, pyramidal and extrapyramidal systems, limbic system, cerebellum and motor control, adaptation in receptors	Observation of the effect of shock and different stimulation in spinal frog (P Group A)
14	Divisions of the autonomic nervous system, structural comparison of autonomic divisions, functions of autonomic divisions, structure and function of the sympathetic division of autonomic nervous system, structure and function of the parasympathetic division of autonomic nervous system	Observation of the effect of shock and different stimulation in spinal frog (P Group B).

22	Textbooks, References and/or Other Materials:	1- CUNNINGHAM JG., KLEIN, BG. Textbook of Veterinary Physiology, Saunders, 2007. 2- MARIEB, EN. Human Anatomy & Physiology Laboratory Manual, Pearson, Benjamin Cummings, 2006. 3- NOYAN, A. Yaşamda ve Hekimlikte Fizyoloji, Meteksan Ankara, 2005. 4- GUYTON, AC. HALL JE. Textbook of Medical Physiology, Saunders, 2005. 5- YILMAZ, B. Fizyoloji. Medisan Yayınevi, Ankara, 2000. 6- YAMAN, K. Fizyoloji. Ezgi kitabevi, Bursa, 2004.
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Quiz	1	10.00
Home work-project	0	0.00
Final Exam	1	50.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24	ECTS / WORK LOAD TABLE
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25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	4	3	3	4	5	4	4	4	4	4	4	0	0	0	0
ÖK2	5	5	4	4	4	5	5	5	5	5	5	5	0	0	0	0
ÖK3	5	5	4	4	5	5	5	5	5	5	5	5	0	0	0	0
ÖK4	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK5	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK6	5	4	5	5	5	5	5	5	5	5	5	5	0	0	0	0

ÖK7	5	5	4	5	5	5	4	4	5	5	5	5	0	0	0	0
ÖK8	5	5	4	4	5	5	4	4	5	5	5	5	0	0	0	0
ÖK9	5	4	3	3	4	5	4	4	4	4	4	4	0	0	0	0
ÖK10	5	5	4	4	4	5	5	5	5	5	5	5	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			