

## EXERCISE PHYSIOLOGY

1	Course Title:	EXERCISE PHYSIOLOGY
2	Course Code:	VET1512
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. Murat YALÇIN
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	<p>muraty@uludag.edu.tr</p> <p>+90 224 294 1228</p> <p>Uludağ Üniversitesi Veteriner Fakültesi Fizyoloji AbD Görükle Bursa 16059</p>
17	Website:	<a href="http://www.veteriner.uludag.edu.tr">http://www.veteriner.uludag.edu.tr</a>
18	Objective of the Course:	<p>To learn the importance of exercise physiology in veterinary medicine</p> <p>To learn the control of nervous, respiratory, circulatory and hormonal system as well as muscular activity during exercise</p> <p>To learn nutrition and energy metabolism along with exercise tolerance during exercise</p>
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Learning importance of exercise physiology in veterinary medicine
	2	Learning skeletal muscles and their response to exercise
	3	Learning nervous control of movement
	4	Learning energy metabolism
	5	Learning respiratory system. Control of the respiratory system during exercise.
	6	Learning circulatory system. Control of circulatory system during exercise.
	7	Learning hormonal control system during exercise
	8	Learning exercise dependant thermoregulation and fluid balance
	9	Learning nutrition during exercise and exercises tolerance
	10	
21	Course Content:	
	<b>Course Content:</b>	

Week	Theoretical	Practice		
1	Exercise physiology in veterinary medicine			
2	Skeletal muscles and exercise; Structure of skeletal muscles, muscle contraction, motor units and types of muscle fibers			
3	Skeletal muscles and exercise; Types of muscle contraction, response of skeletal muscles during exercise, muscle fatigue			
4	Control of movement; Nervous system, reflex arch and involuntary movement, higher nervous centers and control of muscle movement, posture, balance and voluntary movement			
5	Energy metabolism; Energy and work, force, energy systems, oxygen consumption and its relation to energy production			
6	Energy metabolism; Energy production and sport activities, recovery of muscles after exercise			
7	Exercise and respiratory system; Structure and function of respiratory system, pulmonary ventilation, volume and capacity of lungs, oxygen consumption during ventilation			
8	Exercise and respiratory system; Diffusion and transport of gases, regulation of respiration			
9	Circulatory system and its harmony with			
Activities		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Exercise; Oxygen transport system	14	2.00	28.00
11	Adjustment of hormones during exercise; Practical/Labs	0	0.00	0.00
	adrenocorticotrophic hormone, glucocorticosteroids, epinephrine and	11	2.00	22.00
	Homeworks	0	0.00	0.00
12	Adjustment of hormones during exercise; Projects	0	0.00	0.00
	Field Studies	0	0.00	0.00
	Parathyroid hormone, Erythropoietin, Insulin and	1	20.00	20.00
	Others	0	0.00	0.00
13	Thermoregulation and fluid balance during exercise; Final Exams	1	20.00	20.00
Total Work Load				110.00
	Tolerance, sources of energy, protein, glycogen stores, minerals, vitamins, Factors			3.00
ECTS Credit of the Course				3.00
22	Textbooks, References and/or Other Materials:	1- Ergen, E. Egzersiz Fizyolojisi. Nobel, ANKARA, 2007. 2- Çeviri: Yıldız, S. DUKES Veteriner Fizyoloji. Medipres, MALATYA, 2008. 3- Textbook of medical physiology. Guyton AC, Hall JE. Çeviri Ed: Çavuşoğlu, H. Tıbbi Fizyoloji, W.B. Saunders Company, London, Tokyo, 10. Baskı. 1998.		
23	Assesment			
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT	
Midterm Exam		1	30.00	
Quiz		1	10.00	
Home work-project		0	0.00	
Final Exam		1	60.00	

Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade	40.00	
Contribution of Final Exam to Success Grade	60.00	
Total	100.00	
Measurement and Evaluation Techniques Used in the Course		
<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>	

<b>25</b>	<b>CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS</b>															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK2	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK3	5	5	5	5	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	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK7	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK8	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
ÖK9	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0
<b>LO: Learning Objectives    PQ: Program Qualifications</b>																
<b>Contribution Level:</b>	<b>1 very low</b>		<b>2 low</b>		<b>3 Medium</b>		<b>4 High</b>		<b>5 Very High</b>							