AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Muscle and Peripheral Nerve Physiology								
Course Code	VFZ603		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	6	Workload	150 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	To realize the physioligy and types of muscle. To get information about the functions of sensory, motor and autonomical nerves.								
Course Content	The mechanic of muscle, the molecular mechanisims of muscle contraction, skeletal muscle and smooth muscle, motor unit, neuro musculer junction, synaptic potantials.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	38
Final Examination	1	60
Quiz	4	1
Term Assignment	1	1

Recommended or Required Reading	
1	Reece W.O. (2008) Dukes Veteriner Fizyoloji Cilt I ve II, Onikinci Baskı (Türkçe Çeviri). Ed: Yıldız S. Medipres, Malatya.
2	Guyton AC, Hall JE (2001) Tıbbi Fizyoloji Onuncu baskı (Türkçe Çeviri). Ed: Çavuşoğlu H. Nobel Tıp Kitabevi, İstanbul.
3	Noyan A. (2003). Yaşamda ve Hekimlikte Fizyoloji. 13. baskı, Meteksan-Ankara.
4	Randall D., Burggren W., French K, Fernald R., (1997). Eckert Animal Physiology. Mechanisms and Adaptations. 4th Ed., New York.
5	G.C. Whittow et al. (1998). Sturke's Avian Physiology.
6	Willmer P., Stone G., Johnston I. (2005). Environmental Physiology of Animals. 2nd Ed. Blackwell Publishing.
7	Despopoulos A., Silbernagl S. (2003). Color Atlas of Physiology 5th Ed. Thieme, Stuttgart New York.
8	Vander et al. (2001). Human Physiology: The Mechanism of Body Function, 8th Ed. The McGraw-Hill Companies.

Week	Weekly Detailed Course Contents	
1	Theoretical	Neuromusculer junction
	Practice	Skeletal muscle contarction
2	Theoretical	The sensory receptors of skeletal muscle.
	Practice	Izotonic and izometric contraction.
3	Theoretical	The membrane and action potantials in the smooth muscle.
	Practice	The spontaneous contarction in the smooth muscle.
4	Theoretical	The neural and humoral control of smooth muscle contraction.
	Practice	Düz kasın kimyasallar ile aktivasyonunun değiştirilmesi ve düz kasın çeşitli kimyasallara verdiği cevap
5	Theoretical	Action potantial in the skletal muscle.
	Practice	The mechanisms of skeletal muscle contraction and energy.
6	Theoretical	Cardiac muscle contarction mechanism.
	Practice	Muscle weakness
7	Theoretical	The mechanisms of skeletal muscle contraction
	Practice	Treppe in the varous muscles.
8	Theoretical	Midterm
	Practice	Midterm
9	Theoretical	12 çift beyin sinirleri
	Practice	Tetanus in muscle
10	Theoretical	Spinal nerves

10	Practice	The refractor period of cardiac muscle and its importance.
11	Theoretical	Ganglions
	Practice	Measurement of nerve conduction velocity.
12	Theoretical	The induction of autonom nervous system.
	Practice	Reaction time.
13	Theoretical	Sympathic nervous system
	Practice	Electromyographi-I
14	Theoretical	Parasympathic nervous system
	Practice	Electromyographi-II
15	Theoretical	Presentations.
	Practice	To evaluate of EMG recordings.

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Lecture - Practice	14	1	2	42
Assignment	4	2	1	12
Term Project	1	20	1	21
Quiz	4	1	1	8
Midterm Examination	1	8	1	9
Final Examination	1	15	1	16
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	1. To realize the structure and functions of skeletal muscle.
2	2. To realize the structure and functions of smooth muscle
3	3. To realize the structure and functions of cardiac muscle.
4	4. To realize the physiological functions of peripheric nerves.
5	5. To be able to realize neural activities recording clinically.

Programme Outcomes *(Physiology (Veterinary Medicine) Doctorate)*	
1	Has a deep and broad knowledge about the field and the interdisciplinary area related with the field through the achievements gained in undergraduate and professional levels
2	Has the knowledge to create original ideas, analyze them and develop definition/product/diagnosis methods by using the knowledge gained in undergraduate and/or professional experience, when needed
3	Is knowledgeable about theories and practices in methodological and scientific research methods to run an independent research
4	Excels in the laboratory, clinical and similar fields by using the theoretical and practical information gained in former education, and has the ability to create solutions in related fields
5	Designs and develops scientific methodology for the advanced level/newly defined/emerged problems about the field
6	Excels in the known scientific methods in the field for the advanced level/ newly defined/emerged problems
7	Designs unique researches and implements independently
8	Analyzes, synthesizes and evaluates the new ideas in related fields by using critical thinking
9	Plans, creates teams and carries out the interdisciplinary research projects in order to create solutions to the known/newly defined problems
10	Joins to congresses, panels, symposiums, workshops, seminars, article discussions and problem solving sessions in different disciplines, and exchanges information with the other professionals to contribute to the solutions
11	Broadens the borders of scientific information by publishing scientific articles in national and/or international peer-reviewed journals
12	Creates new ideas and methods to contribute to the technological, social and cultural progress, or to help the development of information society by using the theoretical, practical, independent research, abilities responsibly
13	Designs and implements social projects with the awareness of creating an information society
14	Compiles and interprets any type of data (field observation, scientific knowledge etc.) in accordance with the aims
15	Develops and uses strategies about related topics with the field

16	Implements and defends institutional and practical information and abilities in accordance with the needs of the country and the world, and changes when necessary
17	Follows up and uses all the updates about the field (scientific information, legislations etc.), and has the qualification to change them
18	Adopts lifelong learning as a principle and acknowledges that the information gained through research is the most valuable gain

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	2	2	2	2	1
P2	2	2	2	2	2
P3	1	1	1	1	1
P4	2	2	2	2	2
P5	2	2	2	2	1
P6	2	2	2	2	2
P7	1	1	1	1	1
P8	3	3	3	3	3
P9	1	1	1	1	1
P10	3	3	3	1	3
P11	4	4	4	4	4
P12	2	2	2	2	2
P13	2	2	2	2	2
P14	4	4	4	4	4
P15	4	4	4	4	4
P16	4	4	4	4	4
P17	4	4	4	4	4
P18	4	4	4	4	4