



**AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
VETERINARY PHYSIOLOGY
PHYSIOLOGY (VETERINARY)
PHYSIOLOGY (VETERINARY) MASTER
COURSE INFORMATION FORM**

Course Title	Metabolism and Thermoregulation								
Course Code	VFZ535		Course Level		Second Cycle (Master's Degree)				
ECTS Credit	4	Workload	100 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To comprehend of the basic principles of protein, carbohydrate and lipid metabolism in mammals, Heat and its conduction, the effect of environmental temperature on organisms and understanding of the mechanisms of body temperature regulation								
Course Content	Carbohydrate, fat and protein metabolism, vitamins and minerals, and regulation of body temperature								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	38
Final Examination	1	60
Quiz	2	1
Term Assignment	1	1

Recommended or Required Reading

1	Randall D., Burggren W., French K, Fernald R., (1997). Eckert Animal Physiology. Mechanisms and Adaptations. 4th Ed., New York
2	G.C. Whittow et al. (1998). Sturke's Avian Physiology
3	Willmer P., Stone G., Johnston I. (2005). Environmental Physiology of Animals. 2nd Ed. Blackwell Publishing
4	Despopoulos A., Silbernagl S. (2003). Color Atlas of Physiology 5th Ed. Thieme, Stuttgart New York
5	Bradley T.J. (2009). Animal Osmoregulation Oxford University Press

Week	Weekly Detailed Course Contents	
1	Theoretical	Control of energy balance
2	Theoretical	Metabolic rate
3	Theoretical	Carbohydrate metabolism
4	Theoretical	Protein metabolism
5	Theoretical	Lipid metabolism
6	Theoretical	Control of food intake
7	Theoretical	Metabolic pathways
8	Theoretical	Midterm
9	Theoretical	Leptin and its function
10	Theoretical	Heat and its conduction
11	Theoretical	The body temperature
12	Theoretical	Nervous and hormonal control of the body temperature
13	Theoretical	Heat production
14	Theoretical	Heat loss
15	Theoretical	Poikilothermia and homoiothermia

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Assignment	2	2	1	6
Term Project	1	20	1	21
Quiz	2	1	1	4



Midterm Examination	1	7	1	8
Final Examination	1	18	1	19
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = ECTS	4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To have knowledge about the control of energy balance in the body
2	To have knowledge about the processing of protein, carbohydrate and lipid metabolism
3	To have knowledge about heat and its conduction, poikilothermia and homiotherm, temperature
4	To have knowledge about heat metabolism, environmental physiology, disorders of thermoregulation
5	To have knowledge about heat production and thermoregulation

Programme Outcomes (Physiology (Veterinary) Master)

1	Understands and defines the interdisciplinary interaction with the associated fields
2	Uses theoretical and practical information learned in the education
3	Creates solution proposals by using background education
4	Combines and interprets the information from different disciplines, and creates solution proposals and scientific information to contribute the solution process, when needed
5	Involves in professional organizations and institutions related with the educational background
6	Takes responsibility for individual and group work, and do the assignments in line with the skills
7	Communicates with the professionals out of the field when it is necessary, and contributes to the solution as a team member
8	Understands the production and publishing methods of scientific information
9	Determines the source and the type of information that is needed related with the field and chooses the activities that s/he wants to participate, by using his/her critical thinking abilities that is developed in the education
10	Excels technological devices both for professional and social purposes
11	Compiles any kind of data related with the field (field observations, produced scientific information etc.) and analyzes and interprets the results according to the aims of the research
12	Determines the environmental health rules and applies them for prevention
13	Applies the knowledge gained in professional level with the awareness of the needs of the region and the country, and develops a defense capability
14	Conceptualizes the phenomena and the events related with the field, studies scientific methods and techniques, interprets results; analyzes and hypothesizes methods in accordance with the results and designs solution or treatment alternatives addressing the problems
15	Follows up the updates of information in the field by using all kinds of sources (scientific information, legislations etc.), and uses when needed

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	2
P2	4	4	4	4	4
P3	4	4	4	4	4
P4	2	2	2	2	2
P5	2	2	2	2	2
P6	2	2	2	2	2
P7	2	2	2	2	2
P8	1	1	1	1	1
P9	2	2	2	2	2
P10	1	1	1	1	1
P11	4	4	4	4	4
P12	2	2	2	2	2
P13	1	1	1	1	1
P14	1	1	1	1	1
P15	3	3	3	3	3

