AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Rumen Physiology								
Course Code	VFZ631		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	6	Workload	150 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	Understanding the movements of the digestion and functions of the gastrointestinal tract microbiota								
Course Content	The structure of the rumen, rumen movements, rumen digestion, ruminal products								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, 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	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

Week	Weekly Detailed Course Contents	
1	Theoretical	Anatomy of the rumen
	Practice	The anatomical structure of the rumen
2	Theoretical	Development of rumen
	Practice	Rumen movements-I
3	Theoretical	Rumen and reticulum motility
	Practice	Rumen movements II
4	Theoretical	Motility of omazum and abomasum
	Practice	Counting and identification of protozoa in the rumen-I
5	Theoretical	Control of reticulo-rumen motility
	Practice	Counting and identification of protozoa in the rumen-II
6	Theoretical	Rumen microorganisms-I
	Practice	Counting and identification of protozoa in the rumen-III
7	Theoretical	Rumen microorganisms-II
	Practice	Measurement of pH in the rumen
8	Theoretical	Midterm
	Practice	Midterm
9	Theoretical	Fermentative digestion in the rumen
	Practice	Bacterial counts and identification in the rumen-I
10	Theoretical	Carbohydrate digestion in the rumen
	Practice	Rumen bacteria count and identification-II
11	Theoretical	Nitrogenous matter digestion in the rumen
	Practice	Rumen bacteria count and identification-III
12	Theoretical	Anatomy of the rumen
	Practice	The anatomical structure of the rumen
13	Theoretical	Vitamin synthesis in Rumen
	Practice	Rumen in vitro-II
14	Theoretical	Fatty acids
	Practice	Rumen in vitro-III

15	Theoretical	
	Practice	

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Lecture - Practice	14	1	2	42
Assignment	2	2	1	6
Term Project	1	28	1	29
Quiz	4	2	1	12
Midterm Examination	1	10	1	11
Final Examination	1	21	1	22
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	1. Preparation of experimental setups of the digestive system
2	2. To learn about the control of rumen motility
3	3. To learn about the techniques in vitro rumen
4	4. To be informed about rumen micro-organisms
5	5. To perform analyzes of rumen microbiota

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	2
P2	3	3	3	3	3

P4	4	4	4	4	4
P5	3	3	3	2	
P6	3	3	3	3	2
P7	2	2	2	2	2
P8	3	3	3	3	3
P10	3	3	3	3	3
P11	4	4	4	4	4
P12	2	2	2	2	2
P13	1	1	1	1	1
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