



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Metabolism in Ruminants							
Course Code		VBY626		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Digestion of foods in ruminants, synthesis of volatile fatty acid, to teach the difference of metabolism between ruminants and carnivores.							
Course Content		Digestion of nutrient substance, the synthesis of propionic acid, difference of energy metabolism, the molecules of synthesized by only ruminants.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	60
Quiz	2	5
Assignment	4	5

Recommended or Required Reading

1	Ası,T.: Tablolarla biyokimya-2, 1997
2	Sözbilir, N.B., Bayşu, N.: Biyokimya, 2008

Week	Weekly Detailed Course Contents	
1	Theoretical	Digestive system in ruminants
2	Theoretical	Metabolism
3	Theoretical	Energy metabolism of ruminants.
4	Theoretical	Calorimeter in ruminants
5	Theoretical	Carbohydrat metabolism in ruminants.
6	Theoretical	Fragmanetation of cellulose and hemicellulose in Rumen
7	Theoretical	Fragmentation of digestive carbohydrates in rumen
8	Intermediate Exam	Midterm exam
9	Theoretical	Metabolism of volatile fatty acid in ruminants
10	Theoretical	Lipid metabolism in ruminants.
11	Theoretical	Protein metabolism in ruminants
12	Theoretical	Water metabolism in ruminants
13	Theoretical	Endocrine system and hormones in ruminants
14	Theoretical	Metaboism of vitamin and minerals in ruminants
15	Theoretical	Hormonel control of carbonhydrate, protein and lipid metabolism
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	1	2	45
Assignment	4	1	4	20
Reading	5	2	0	10
Quiz	2	2	2	8
Midterm Examination	1	6	1	7



Final Examination	1	9	1	10
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Student can learn blood levels of some biochemical parameters in ruminants.
2	Student can learn mechanism of some metabolic differences (Milk production) in ruminants.
3	To have information about the digestion of carbohydrates in ruminants
4	To have information about the digestion of lipids in ruminants
5	To have information about the digestion of proteins in ruminants

Programme Outcomes (Biochemistry (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	5	5	5	5	5
P3	5	5	5	5	5
P8	5	5	5	5	5
P11	5	5	5	5	5
P12	5				
P13		5	5	5	5
P15	4	5	4	4	4
P17	5		4	4	4

