

Course Title		Biochemistry of Body Fluids and Tissues							
Course Code		VET247		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	1	Practice	1	Laboratory	0
Objectives of the Course		To teach biochemistry of blood, the structure of urine, cerebrospinal fluid, biochemistry of blood, features of transudate and exudate, content of bile and production of bile, subcelluler molecules in							
Course Content		Blood biochemistry, urine biochemical structure, chemical composition of the cerebrospinal fluid milk chemistry, transudat and exudate fluids properties, bile fluid formation and content of subcellular biochemical functions of molecules							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion					
Name of Lecturer(s)		Assoc. Prof. Serap ÜNÜBOL AYPAK, Prof. Ayşegül BİLDİK, Prof. Funda KIRAL, Prof. Pınar Alkım ULUTAŞ							

Prerequisites & Co-requisites

Equivalent Course	VET243
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Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	28
Final Examination	1	48
Quiz	1	6
Assignment	1	6
Laboratory	1	12

Recommended or Required Reading

1	Kaya, N. (1993) Biyokimya, Atatürk Üniversitesi, Erzurum
2	Ersay, E., Bayşu, N. (1986) Biyokimya, Ankara Üniversitesi Veteriner Fakültesi, Ankara.
3	Murray, R.K. (1993) Harper's Biochemistry, Appleton and Lange, Norwalk
4	Sittman, D. (2000) Biyokimya, çev. Güner G., Nobel, İstanbul
5	Onat, T., Emerk, K. (1997) Biyokimya, Saray, İzmir

Week	Weekly Detailed Course Contents	
1	Theoretical	Cell Chemistry
	Practice	applications
2	Theoretical	Tissue chemistry, epidermal tissue, connective tissue, cartilage and bone.
	Practice	To preparation of tissue homogenates
3	Theoretical	Lipid tissue, nervous tissue, muscle
	Practice	Bone tests
4	Theoretical	Chemistry of body fluids
	Practice	Show the presence of the enzyme in muscle (catalase)
5	Practice	Blood collection methods, separation of plasma and serum
6	Theoretical	Lymph, synovial fluid and cerebrospinal fluid
	Practice	Hemolysis and lipemia
7	Practice	Analyses of synovial fluid
	Intermediate Exam	Midterm
8	Theoretical	Transudate and exudate
	Practice	Biochemical analyses of cerebrospinal fluid
9	Theoretical	Genital fluids
	Practice	Analyses of transudate and exudate
10	Practice	Biochemical analyses of sperma
11	Theoretical	Saliva



11	Practice	Urine analyses
12	Theoretical	Milk, sweat, tears
	Practice	Analyses of saliva
13	Theoretical	Pancreatic and gastric fluid
	Practice	Calcium determination in milk
14	Practice	Analyses of rumen fluid
15	Theoretical	Discussion
	Practice	Bilirubin determination in bile

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0.5	1	22.5
Term Project	1	4	1	5
Laboratory	15	0.5	1	22.5
Reading	1	0	6	6
Quiz	2	2	0.5	5
Midterm Examination	1	6	1	7
Final Examination	1	7	0	7
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to have knowledge about biochemistry of blood
2	To be able to have knowledge about biochemical structure of urine
3	To be able to have knowledge about biochemical structure of milk, sweat and tear
4	To be able to know gastric and pancreatic fluid, bile composition
5	To be able to know about transudate and exudate
6	To be able to have knowledge about cell chemistry
7	To be able to know about biochemical structure of tissues

Programme Outcomes (Veterinary Medicine)

1	The student knows anatomy, structure/function of organs and tissues as well as physiological mechanisms of especially farm animals.
2	The student successfully executes the clinical applications on the basis of theoretical and applied knowledge.
3	The student diagnoses diseases using various examination methods.
4	The student can perform differential diagnosis by evaluating clinical findings in the light of laboratory findings.
5	The student is able to treat microbial, viral, parasitic and metabolic diseases successfully.
6	The student is able to perform basic surgical operations in animals.
7	The student is able to intervene in any type of parturition.
8	The student knows and executes basic principles of artificial insemination.
9	If the need arises, the student is able to perform necropsy and pathological evaluation for the aim of diagnosis and differential diagnosis.
10	The student knows and executes principles of preventive medicine.
11	The student applies needed applications on veterinary public health and food safety issues
12	The student recognizes different races of within a species on the basis of morphology and physiology
13	The student knows management practices concerning farm animals and is capable of managing of a farm
14	The student prepares animal nutrition rations for farm animals.
15	The student organizes feeding and nutrition programs in animal farms.
16	The student knows and executes the code of veterinary practice
17	The student knows and applies current legislative rules on animal welfare/rights
18	The student takes into account all scientific as well as professional ethic rules in executing veterinary practice
19	The student involves in all fields and practices concerning veterinary medicine

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



	L1	L2	L3	L4	L5	L6	L7
P1	5	5	5	5	5	5	5
P4	5	5	5	5	5	5	5
P19	5	5	5	5	5	5	5

