

## CLINICAL LABORATORY DIAGNOSIS II

1	Course Title:	CLINICAL LABORATORY DIAGNOSIS II
2	Course Code:	VET5225
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	5
6	Semester:	9
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	1.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. NAZMIYE GÜNEŞ
15	Course Lecturers:	Prof. Dr. Nazmiye Güneş Prof.Dr. Ümit Polat Prof. Dr. Abdullah Yalçın Prof.Dr. Bayram Şenlik Prof. Dr. Ayşin Şen Doç. Dr. Saime Güzel Doç. Dr. İ Taci Cangül Dr. Öğr. Üyesi Duygu Udum Dr. Öğr. Üyesi Füsun Ak Sonat
16	Contact information of the Course Coordinator:	Prof. Dr. Nazmiye Güneş ngunes@uludag.edu.tr 0 224 2941282 U.Ü.Veteriner Fakültesi Biyokimya ABD
17	Website:	
18	Objective of the Course:	Being able to determine and interpret biochemical parameters that aid in clinical diagnosis in in small animal medicine, and interpretation and application of physiological, pathological and microbiological
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	Being able to select and apply biochemical parameters that aid in clinical diagnosis in diseases resulting from pathological and metabolic disorders in small animals.
	2	Being able to apply and perform tests and methods that are used to obtain biochemical parameters and interpret results.
	3	Being able to explain mechanisms of diseases frequently observed in small animals.
	4	Being able to choose clinical material that are used in diagnosis of small animal diseases and apply biopsy techniques.
	5	Being able to utilize diagnostic methods in immune disorders and parasitic infestations frequently observed in small animals.

	6	Being able to integrate all diagnostic knowledge acquired about small animal diseases and use in diagnosis of diseases		
	7	Being able to communicate with workers and animal owners		
	8	Being able to disseminate knowledge gained about clinical biochemical methods in diagnosis of small animal diseases verbally and in writing.		
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<b>21</b>	Course Content:			
	<b>Course Content:</b>			
Week	Theoretical	Practice		
1	Coagulation and diagnosis of clotting disorders.	Determination of the clotting time with Lee-White method; Prothrombin time (PT)-Quicks one -stage method		
2	Clinical enzymology and interpretation	Measurement of serum AST and ALT		
3	Laboratory tests in liver diseases: albumin, globulin, ammonia and urea nitrogen, starvation blood ammonia tolerance test, hypo and hyperproteinemia, diagnostic approach to hyperglobulinemia	Analysis of serum total protein and gluteraldehyde test		
4	Tests of hepatic metabolism: bilirubin metabolism and icterus, diagnostic approach to urine bilirubin, urobilinogen and high serum bile acids	Ehrlich's benzaldehyde test, determination of urobilinogen and bile acids in urine, the determination of bilirubin by using Fauchet's test, the use of urine strips		
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Glomerular function tests: interpretation of azotemia, creatinine clearance, tubular	14	1.00	14.00
Practicals/Labs		14	2.00	28.00
Self study and preparation		5	3.00	15.00
Homeworks		0	0.00	0.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		1	10.00	10.00
Others		1	8.00	8.00
Final Exams		1	15.00	15.00
Total Work Load				100.00
Total workload, 30 hr				3.00
ECTS Credit of the Course				3.00
10	Lipoproteins, interpretation of hyperlipidemia and hypo- and hypercholesterolemia	Analysis of serum total lipid and cholesterol		
11	Immunologic mechanisms in immune mediated diseases, immunologic mechanisms of canine and feline IgE and immune complex mediated disease	Erythrocyte agglutination tests, anti-erythrocyte antibody tests, anti-nuclear antibody tests, anti-thrombocyte antibody tests, rheumatoid factor test		
12	Sampling from lymph node aspirates, bone marrow, nasal discharge, etc. Sampling and evaluating transudates and exudates	Preparing cytological smears from lymph nodes, organs, transudates and exudates obtained from slaughterhouses and clinics; discussion of archive cases		
13	Skin biopsies: sampling and evaluation	Sampling skin biopsies; discussion of archive cases		
14	Laboratory diagnostic techniques and interpretation of the results in parasitic diseases	Quantitative examination techniques, their values, evaluations and applicabilities in parasitology		

<b>22</b>	Textbooks, References and/or Other Materials:	Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics , Carl A Burtis, David E.Bruns , Elsevier,2014. Genel ve Klinik Biyokimya, M. Üstdal, O. Donma, R. Vuillaume, K. Dolbun,1. Baskı Güneş Tıp Kitabevleri, 2017. Klinik Laboratuvar Tanı, Turgut K. II. Baskı, İstanbul, 2002 Guyton Tıbbi Fizyoloji, Hall J.E.,Güneş Tıp Kitabevleri , 13. Baskı, 2017 Şen A; Veteriner İmmunoloji, İkinci Baskı, Dora Yayıncılık, Bursa, 2019 Textbook of clinical parasitology in dogs and cats. .Beugnet, F., Halos, L., Guillot, J. ss. 432. Servet editorial Grupo Asís Biomedica, S.L.. Spain. (2018). Freeman KP, Klenner S. Veterinary Clinical Pathology: A Case-Based Approach. CRC Press, Londra, İngiltere, 2015
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<b>23</b>	Assesment	
<b>TERM LEARNING ACTIVITIES</b>		<b>NUMBE R</b>
Midterm Exam		1
Quiz		0
Home work-project		0
Final Exam		1
Total		2
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

<b>24</b>	<b>ECTS / WORK LOAD TABLE</b>
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<b>25</b>	<b>CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS</b>															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0

**LO: Learning Objectives    PQ: Program Qualifications**

<b>Contrib ution Level:</b>	<b>1 very low</b>	<b>2 low</b>	<b>3 Medium</b>	<b>4 High</b>	<b>5 Very High</b>
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