

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
Heinzelova 55
Tel. 01/2390180
Division for basic and preclinical sciences
Unit: Pathophysiology
Email: mbelic@vef.unizg.hr

Zagreb, 21.07.2023.

COURSE SYLLABUS

Course name: Pathophysiology I

Academic year 2023. /2024.

Course leader: Full Professor Maja Belić, PhD

Vice course leader: Full Professor Romana Turk, PhD

Teachers: Full Professor Maja Belić, PhD
Full Professor Romana Turk, PhD
Full Professor Mirna Robić, PhD
Siniša Faraguna, DMV

Associate assistant: Sandra Kunštek, mag. ing. biotechn.

First day of classes: November 08, 2023.

Last day of classes: December 15, 2023.



169299	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	21.07.2023	
Klasifikacijska oznaka	Org. jed.	
605-03/23-04/28	251-61-32;	
Urudžbeni broj	Prilozi	Vrijednost
251-61-13-23-01	0	-

Activities - Pathophysiology I (1/2)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
08/11/2023	12:00	13:30	p01 Introduction, inflammation and reparation	5E-1, 5E-2, 5E-3		1:30	Turk R.	P_fiziologija
13/11/2023	8:15	9:45	p05 Disturbances in acid-base balance	5E-1, 5E-2, 5E-3		1:30	Turk R.	V_patofiziologija
15/11/2023	12:00	13:30	p03 Disorders of pituitary and thyroid gland	5E-1, 5E-2, 5E-3		1:30	Robic M.	P_fiziologija
15/11/2023	14:00	14:45	v01 Spectrophotometry and laboratory interferences	5E-1, 5E-2, 5E-3		0:45	Nastavnici na predmetu	V_patofiziologija
17/11/2023	10:00	11:30	v02 Total protein concentration in serum	5E-1, 5E-2, 5E-3		1:30	Nastavnici na predmetu	V_patofiziologija
22/11/2023	12:00	13:30	p04 Disorders of pancreas and adrenal glands	5E-1, 5E-2, 5E-3		1:30	Robic M.	P_fiziologija
01/12/2023	10:00	11:30	v03 Dysproteinemia and acute phase proteins	5E-1, 5E-2, 5E-3		1:30	Nastavnici na predmetu	V_patofiziologija
05/12/2023	10:00	11:30	p02 Tumorigenesis	5E-1, 5E-2, 5E-3		1:30	Belic M.	P_fiziologija
05/12/2023	14:00	15:30	s01 Disorders of vitamins and mineral metabolism	5E-1, 5E-2, 5E-3		1:30	Belic M.	P_fiziologija
08/12/2023	12:00	13:30	v04 Disturbance in glucose metabolism	5E-1, 5E-2, 5E-3		1:30	Nastavnici na predmetu	V_patofiziologija
11/12/2023	10:00	11:30	p06 Pathophysiology of nervous system	5E-1, 5E-2, 5E-3		1:30	Belic M.	P_fiziologija
12/12/2023	12:00	13:30	v05 Acid-base balance, cases	5E-1, 5E-2, 5E-3		1:30	Nastavnici na predmetu	V_patofiziologija
12/12/2023	14:00	15:30	s02 Oxidative stress and antioxidative protection	5E-1, 5E-2, 5E-3		1:30	Turk R.	P_fiziologija

Activities - Pathophysiology I (2/2)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
15/12/2023	10:00	11:30	Midterm	5E-1, 5E-2, 5E-3		1:30		P_fiziologija, R_patofiziologija
Total: 14						20:15		

STUDENT OBLIGATIONS

Lecture attendance	<p>Maximal number of points: 6 Minimal number of points: 3 (one hour of lectures is 0.5 points) During the course of Pathophysiology I, student must attend minimum of six hours of lectures to achieve minimal 3 points. Maximal number of points is achieved if student attends all of 12 hours of lectures. For each excused absence student gains back 0,5 points per hour of lecture.</p>
Seminars attendance	<p>Maximal number of points: 6 Minimal numbers of points: 3 (each seminar hour is 1.5 points) Student must attend minimum two hours of seminars. Each excused absence in approved limits (two hours) students can make up in agreement with seminar leader in written form and the points for attendance will be given back.</p>
Practicals attendance	<p>Maximal number of points: 6 Minimal numbers of points: 4 (each hour of practice is 0.67 points) Student must be present at minimum of six hours of practicals to achieve minimal 4 points. Each excused absence within approved limits (three hours) students can make up in agreement with practical's leader. After successful made up student achieves 0.67 points for hour</p>
Active participation in seminars and practicals	<p>Maximal number of points: 10 Minimal number of points: 5 Each attended, written and signed practical results in 1 point, therefore maximum of 5 points (5 programs x 1 = 5) can be achieved. During the practicals short knowledge checkings will be performed and that way students can gain maximum of 2 points. During the seminars students elaborate given themes in smaller groups, and that way they can earn maximal 3 points</p>
Final exam	<p>For final exam attendance student must gain minimal 16 points from attendance and active participation on lectures and practicals and minimum of 20 points from continuous knowledge checking. Exam will be in written and oral form</p>

Examination requirements	<p>Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine.</p> <p>Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam.</p> <p>According to Article 45, paragraph 3 of the Regulation on Integrated Undergraduate and Graduate Study of Veterinary Medicine, a student can justifiably be absent up to 50 % of the lectures, 30% of the seminars and 30 % of the practicals.</p> <p>Additionally, according to Article 41, paragraph 4 of the Regulation on Integrated Undergraduate and Graduate Studies, in cases where the subject has a low number of hours, absence from classes exceeding 50% is allowed only with a valid justification and requires making up for the missed classes under conditions determined by the course instructor.</p>
--------------------------	--

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	<p>Maximal number of points: 32 Minimal number of points: 20</p> <p>Written knowledge checking will be held after termination of practicals. Students have to answer 16 questions, each correctly answered question will be evaluated with 2 points. For students who do not earn the minimum number of points, three more terms of colloquium will be organized in the current academic year. If a student does not pass the colloquium in the current academic year, he/she loses the right to access the colloquium and must re-enroll the course in order to master the practicals and regain the right to take the colloquium in the next academic year.</p>
Date of mid-term	15.12.2023. at 10:00
Final exams (dates)	09.11.2023., 01.02.2024., 13.02.2024.
Form of final exam	The exam will be in written and oral form. Students will first take the written part, and those who meet the criteria of the written part will be able to take the oral part of the exam.

LITERATURE

Obligatory literature	Gamulin, S., M. Marušić, Z. Kovač et al. (2013): Pathophysiology. Basic mechanisms of disease, Medicinska naklada, Zagreb David O. Slauson, Barry J. Cooper (1982., 1999.): Mechanisms of Disease. Mosby. Steven L. Stockham and Michael A. Scott (2008.): Fundamentals of Veterinary Clinical Pathology. Blackwell Publishing. Mary Anna Thrall (2004.): Veterinary Hematology and Clinical Chemistry. Lippincott Williams & Wilkins. J. Kaneko (1980., 2008.): Clinical Biochemistry of Domestic Animals
Optional literature	Stjepan Gamulin Matko Marušić, Zdenko Kovač i sur. (1988., 2002., 2011.): Patofiziologija. Medicinska naklada, Zagreb. Tatjana Božić (2007., 2012.): Patološka fiziologija domaćih životinja. Naučna KMD, Beograd. Romana Turk (2005.): Vježbe iz patofiziologije - biokemijski dio (interna skripta). Nina Poljičak Milas: Patofiziologija poremećaja žlijezdi s unutarnjim lučenjem, web predavanje Mirna Robić (2016): Patofiziologija upale, bolesti deficit i suficita vitamin, web pr

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	<p>During the course of Pathophysiology I students achieve knowledge on basic pathophysiological processes on cellular and tissue level during homeostatic disturbances in organism. Therefore, the basis for better understanding disturbances in particular organs and organic system is achieved for understanding the course of Pathophysiology II.</p> <p>During practical part of the course students gain skills in performing basic biochemical laboratory analyses, choosing the correct method and proper interpretation of achieved results</p>
Learning outcomes	<p>After successful Pathophysiology I mastering, student will be able to</p> <ul style="list-style-type: none">- define the terms health and disease,- describe endocrinopathies,- describe bioactive substances and their role in pathophysiology,- describe disturbances in neural system function,- master biological samples handling,- determine serum protein, glucose and lipid concentrations and interpret the results

GRADING SCHEME

<i>Points</i>	<i>Grade</i>
Up to 59	1 (F)
60-68	2 (E)
69-76	2 (D)
77-84	3 (C)
85-92	4 (B)
93-100	5 (A)

Course leader:

M. Belić

Full Professor Maja Belić, PhD

Head of Unit:

M. Belić

Full Professor Maja Belić, PhD