

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE

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Division: Veterinary Public Health and Food Safety

Organizational unit: Parasitology and Invasive Diseases with Clinics

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Register No of the organisational unit:



177926	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	25.01.2024	
Klasifikacijska oznaka	Org. jed.	
605-03/23-04/28	251-61-32;251-61-41;	
Uredžbeni broj	Prilozi	Vrijednost
251-61-12/147-24-81	0	-

COURSE SYLLABUS

Course name: Parasitology and Parasitic Diseases
Academic year 2023/2024

Course leader: Full. Prof. Albert Marinculić, Deputy course leader: Assoc. Prof. Franjo Martinković

Teachers: Full. Prof. Albert Marinculić
Assoc. Prof. Franjo Martinković
Teaching Assistant Nika Konstantinović

First day of classes: 28/2/2024

Last day of classes: 6/6/2024

Activities - Parasitology and invasive diseases II (1/6)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
28/02/2024	9:00	10:30	v01 Ancylostomatidae, Strongylidae	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
28/02/2024	13:00	14:30	v01 Ancylostomatidae, Strongylidae	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
29/02/2024	12:00	13:30	v01 Ancylostomatidae, Strongylidae	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
05/03/2024	11:00	12:30	p01 Trichostrongylidae, Rhabditidae, Strongylidae	6E-1, 6E-2, 6E-3		1:30	Marinculic A.	V_parazitologija
08/03/2024	8:15	9:45	v02 Trichostrongylidae, Strongyloides	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
08/03/2024	12:00	13:30	v02 Trichostrongylidae, Strongyloides	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
08/03/2024	13:45	15:15	v02 Trichostrongylidae, Strongyloides	6E-3, V_parazitologija		1:30	Nastavnici na predmetu	V_parazitologija
11/03/2024	13:15	14:45	p02 Dictyocaulidae, Metastrongylidae, Protostrongylidae	6E-1, 6E-2, 6E-3		1:30	Marinculic A.	V_parazitologija
12/03/2024	7:30	9:00	v03 Lungworms, Trichuris spp.	6E-3, V_parazitologija		1:30	Nastavnici na predmetu	V_parazitologija
14/03/2024	8:15	9:45	v03 Lungworms, Trichuris spp.	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
18/03/2024	7:30	9:00	v03 Lungworms, Trichuris spp.	6E-2		1:30	Nastavnici na predmetu	V_parazitologija

Activities - Parasitology and invasive diseases II (2/6)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
20/03/2024	11:45	13:15	v04 Coprological parasitological examination pt.1	6E-3		1:30		
20/03/2024	13:30	15:00	v04 Coprological parasitological examination pt.1	6E-1		1:30		
20/03/2024	15:15	16:45	v04 Coprological parasitological examination pt.1	6E-2		1:30		
21/03/2024	14:00	15:30	v05 Coprological parasitological examination pt.2	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
22/03/2024	8:15	9:45	v05 Coprological parasitological examination pt.2	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
22/03/2024	13:30	15:00	v05 Coprological parasitological examination pt.2	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
25/03/2024	7:30	9:00	p03 Trichuridae, Trichinellidae, Capillaridae	6E-1, 6E-2, 6E-3		1:30	Marinculic A.	V_parazitologija
26/03/2024	7:30	9:00	v06 Diagnostics of trichinellosis pt.1, trichineloscopy	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
26/03/2024	15:15	16:45	v06 Diagnostics of trichinellosis pt.1, trichineloscopy	6E-3		1:30	Nastavnici na predmetu	V_parazitologija

Activities - Parasitology and invasive diseases II (3/6)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
27/03/2024	8:15	9:45	v06 Diagnostics of trichinellosis pt.1, trichineloscopy	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
02/04/2024	11:30	13:00	v07 Diagnostics of trichinellosis pt.2, artificial digestion	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
03/04/2024	8:00	9:30	v07 Diagnostics of trichinellosis pt.2, artificial digestion	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
03/04/2024	15:15	16:45	v07 Diagnostics of trichinellosis pt.2, artificial digestion	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
04/04/2024	7:30	9:00	v08 Coprological parasitological examination pt.3	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
08/04/2024	10:00	11:30	v08 Coprological parasitological examination pt.3	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
08/04/2024	14:00	15:30	v08 Coprological parasitological examination pt.3	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
09/04/2024	12:15	13:45	p04 Filariata, Sirurata, Arthropoda - introduction	6E-1, 6E-2, 6E-3		1:30	Martinkovic F.	V_parazitologija
10/04/2024	9:45	11:15	v09 Dirofilaria	6E-1		1:30	Nastavnici na predmetu	V_parazitologija

Activities - Parasitology and invasive diseases II (4/6)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
11/04/2024	8:15	9:45	v09 Dirofilaria	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
12/04/2024	8:15	9:45	v09 Dirofilaria	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
12/04/2024	15:15	16:45	p05 Acarina, Ixodidae, Argasidae, Trombicidae, Dermanyssidae	6E-1, 6E-2, 6E-3		1:30	Martinkovic F.	V_parazitologija
15/04/2024	14:30	16:00	v10Ixodidae, Argasidae	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
16/04/2024	8:15	9:45	v10Ixodidae, Argasidae	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
17/04/2024	10:00	11:30	v10Ixodidae, Argasidae	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
23/04/2024	14:45	16:15	p06 Sarcoptidae, Psoroptidae, Demodicidae, Cheyletiidae	6E-1, 6E-2, 6E-3		1:30	Marinculic A.	V_parazitologija
24/04/2024	9:15	10:45	v11 Mange	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
26/04/2024	8:15	9:45	v11 Mange	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
26/04/2024	14:45	16:15	v11 Mange	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
06/05/2024	14:15	15:45	p07 Insecta-Introduction, Mallophaga, Anoplura, Siphonaptera	6E-1, 6E-2, 6E-3		1:30	Marinculic A.	V_parazitologija

Activities - Parasitology and invasive diseases II (5/6)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
07/05/2024	10:00	11:30	v12Sucking blood insects	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
07/05/2024	12:00	13:30	v12Sucking blood insects	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
07/05/2024	14:00	15:30	v12Sucking blood insects	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
10/05/2024	15:15	16:45	p08 Tabanidae, muscidae, Hippoboscidae, Culicidae, Caliphoridae, Sarcophagidae, Oestridae	6E-1, 6E-2, 6E-3		1:30	Marinculic A.	V_parazitologija
14/05/2024	13:30	15:00	v13 Facultative and obligatory myasis	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
15/05/2024	14:15	15:45	v13 Facultative and obligatory myasis	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
16/05/2024	13:30	15:00	v13 Facultative and obligatory myasis	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
17/05/2024	11:30	13:00	v14 Vectors and molestants	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
17/05/2024	13:30	15:00	v14 Vectors and molestants	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
21/05/2024	12:30	14:00	v14 Vectors and molestants	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
23/05/2024	10:30	12:00	v15 Ectoparasites, diagnostics	6E-3		1:30	Nastavnici na predmetu	V_parazitologija

Activities - Parasitology and invasive diseases II (6/6)								
	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
24/05/2024	10:00	11:30	v15 Ectoparasites, diagnostics	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
24/05/2024	11:45	13:15	v15 Ectoparasites, diagnostics	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
03/06/2024	14:00	15:30	v16 Clinical diagnostics in parasitology	6E-1		1:30	Nastavnici na predmetu	V_parazitologija
04/06/2024	14:00	15:30	v16 Clinical diagnostics in parasitology	6E-2		1:30	Nastavnici na predmetu	V_parazitologija
06/06/2024	12:00	13:30	v16 Clinical diagnostics in parasitology	6E-3		1:30	Nastavnici na predmetu	V_parazitologija
Total: 56						84:00		

Timetable for LECTURES academic year 2023/2024

STUDENT OBLIGATIONS

Lecture attendance	During the course the student must attend 8 (out of 16) lecture hours in order to gain 1,5 minimal points. Maximally can gain 3 points..
Seminars attendance	
Practicals attendance	During the course the student must attend 22 (out of 32) exercise lessons, 11 programmes out of 16 programmes) in order to gain 4 minimal points. Maximal points that student can gain is 6. Nonattendance must be justified in order to compensate the points
Active participation in seminars and practicals	Students must be prepared for every practical. Preparedness will be tested by short oral questions. During the course, preparedness will be tested totally two times by students engagement or by teachers choice. At each test, student can gain 1.5 points. During the course knowledge and skills to perform coprological examination (theoretical/practical colloquium " Coprological examination. 2 points) and parasitological skin examination (2 points) will be tested. Maximal points for the activity at practicals is 7. Students will receive materials to prepare the practical on time (Merlin). During the semester short colloquia are organized. With perfect (20/20) knowledge the student can gain maximal 8 points. Minimal 5 point will be gained with the scores 11/20. A student who does not achieve minimum 5 points means that is failed and will have the right to a remedial colloquium that will be held after the end of the class (two remedial colloquia at the end of the class)
Final exam	During the semester the student must collect the minimum of 19,5 points (10 for the 2 colloquia , each with the minimum of 5 points and 4 points from two mandatory practical colloquium) 1,5 points for attending 8 (50%) lecture hours, and 4 points for attending 22 exercise hours. During the semester, the maximum number of points is 32 (3 points for two satisfactory oral answers, 16 for two 100% solved colloquium, 4 for two passed mandatory practical colloquia), and for class participation 3 points for 100% of lectures and 6 points for attending 100% of exercises. THE MINIMUM NUMBER OF POINTS NECESSARY TO TAKE THE EXAM is 36 (the sum of the minimum points of the V. and VI. semesters from mentioned elements (attendance of lectures, exercises, two practical colloquia and four mandatory written colloquia) and at least one satisfactory oral answer before the exercises in the entire academic year (which brings 1.5 points). The maximum number of points a student can gain before the exam is 60 (100% attendance at lectures and exercises, 4 satisfactory oral answers (sum of V and VI semesters), four 100% solved written colloquiums (sum of V and VI semesters) and two mandatory practical colloquium The oral exam contains 8 questions. One question brings 0 - 5 points, the maximum is 40 points. A minimum of 24 points is required to pass the the exam.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine (2022). Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam. Regulations On Intergraduate And Graduate Studies, Article 41: a student can justifiably be absent from up to 50% of the lectures; 30 % of the seminars and 30% of the exercises. After the completion of both semesters , the

PARASITOLOGY AND PARASITIC DISEASES

	student must have at least one satisfactory oral answer (1,5 points) gained from the evaluation of activities in order to acquire the right for the signature at the end of the sixth semester.
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GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	Mandatory knowledge test (Parasitological coprological examination) 4 th and 8 th April 2024 Colloquium Nematoda 15 th ,16 th ,17 th 2024. Mandatory knowledge test (Parasitological skin examination) 23 rd , 24 th May 2024 Colloquium Arthropoda 3 rd , 4 th , 6 th June 6. 2024.
Final exams (dates)	13 th March.2024., 19 th April 2024, 24 th June.2024, 8 th July 2024, 4 th September.2024, 18 th September 2024.
Form of final exam	At the final exam the student answers the questions orally.

LITERATURE

Obligatory literature	ZAJAC, A., G. CONBOY(2012): Veterinary Clinical Parasitology, 8 th ed. John Wiley and sons Inc. EISHEIKHA, H.M., N.A. KHAN (2011): Essentials of Veterinary Parasitology, Caister Academic Press, Norfolk, New York FISHER, M., J. MAC GARRY (2006); Focus on Small Animal Parasitology, Bayer Animal Health
Optional literature	HENDRIX, C.M.(2002): Laboratory Procedures, 4th ed. Mosby Elsevier, St. Louis WILLARD, M.D., H. TVEDTEN (2004): Small animal clinical diagnosis by laboratory methods, 4.th ed, Elsevier Inc.

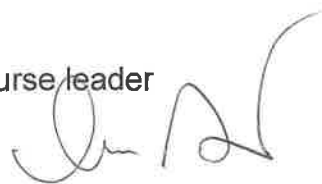
OBJECTIVES AND LEARNING OUTCOMES

Course objectives	This course aims to provide core training in the theoretical and practical aspects of veterinary parasitology, covering the protozoan and metazoan parasites of animals and the vectors which transmit them, and equip students with specialised skills to enable them to pursue a career as a veterinary professional.
Learning outcomes	Understanding the biology and ecology of parasites and vectors of medical and veterinary importance, differentiation and recognition of individual groups of parasites as well as individual parasites and their developmental forms within groups, understanding of invasion methods and pathogenesis of diseases caused by parasites, achievement of diagnostic skills and competencies for taking, preparing and processing samples, diagnosis by identification of parasites or their developmental stages, knowledge of treatment, prevention and monitoring of parasitic diseases, as well as understanding contemporary trends in veterinary parasitology.

GRADING SCHEME

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

Course leader



Head of organizational unit:



PARASITOLOGY AND PARASITIC DISEASES

Note: The course leader is required to submit a Course Syllabus to all teachers and associates pertaining to the Course