

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
Heinzelova 55
Tel. 01/ 2390362
Division: Veterinary Public Health and Food Safety
Department / Clinic Department of Parasitology and Parasitic Diseases with Clinics
Email: albert.marinculic@gmail.com
Register no.:
File no.:
Zagreb, August 20th 2020

COURSE SYLLABUS

Course name: Parasitology and Parasitic Diseases

Academic year 2020-21

Course leader: Prof.dr.sc. Albert Marinculić

Teachers: Doc.dr.sc. Franjo Martinković

Associate teachers: Lea Lovrić, DVM

First day of classes: October 1st 2020

Last day of classes: January 19th 2021

Timetable for LECTURES academic year 2020-2021

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
October 1 st 2020	INTRODUCTION TO PARASITOLOGY	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
October 6 th 2020	PROTISTA/PROTOZOA, COCCIDIOSIS OF POULTRY AND CARNIVORES, TISSUE COCCIDIA	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
October 7 th 2020	PIROPLASMOSIS, GIARDIASIS, CRYPTOSPORIDIOSIS, NEOSPOROSIS	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 12-14 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
October 14 th 2020	LEISHMANIASIS	Doc.dr.sc. Franjo Martinković	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011

October 21 st 2020	DISEASES CAUSED BY TREMATODES	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 10-12 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
October 27 th 2020	DISEASES CAUSED BY CESTODES	Doc.dr.sc Franjo Martinković	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
November 6 th 2020	TAPEWORMS OF CARNIVORES	Doc.dr.sc Franjo Martinković	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 15-17 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
November 23 rd 2020	ECHINOCOCCOSIS, CYSTICERCOSIS, INTRODUCTION NEMATODES	Doc.dr.sc Franjo Martinković	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
November 24 th 2020	ASCARIDAE, ANCYLOSTOMIDAE, OXYURIDAEATODES, ASCARIDAE, ANCYLOSTOMATIDAE,	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A.

	OXYURIDAE			Khan 2011
November 25 th 2020	TRICHOSTRONGYLIDAE, RHABDITIDAE, STRONGYLIDAE	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
November 30 th 2020	TRICHURIDAE, CAPILLARIDAE, TRICHINELLIDAE	Prof.dr.sc Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
December 3 rd 2020	DYCTIOCAULIDAE, METASTRONGILIDAE, PROTOSTRONGYLIDAE	Doc.dr.sc. Franjo Martinković	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
December 7 th 2020	FILARIATA,SPIRURATA, INTRODUCTION ARTHROPODA	Prof.dr.sc. Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 16-18 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
December 11 th 2020	ACARINA,IXODIDAE, ARGASIDAE,	Doc.dr.sc. Franjo Martinković	DEPARTMENT OF PARASITOLOGY AND	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012

	TROMBICIDAE, DERMANYSSIDAE		PARASITIC DISEASES WITH CLINICS 10-12 h	Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
January 11 th 2021	SARCOPTIDAE, PSOROPTIDAE, DEMODICIDAE, CHEYLETIDAE	Prof.dr.sc. Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
January 13 th 2021	INSECTA INTRODUCTION, MALOPHAGA, ANOPLURA, SIPHONAPTERA	Prof.dr.sc. Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 12-14 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011
January 18 th 2021	TABANIDAE, MUSCIDAE,HIPPOBOSCIDAE .CULICIDAE,CALIPHORIDAE, SARCOPHAGIDAE, OESTRIDAE	Prof.dr.sc. Albert Marinculić	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 12-14 h	Veterinary clinical parasitology, A. Zajac, G. Conboy, 2012 Essentials of Veterinary Parasitology, H.M. Eishekha,N.A. Khan 2011

Timetable for PRACTICALS academic year 2020-2021

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical	Group	Location / time	Literature
October 2 nd 2020	INTRODUCTION TO PARASITOLOGY	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
October 8 th 2020	COCCIDIA OF POULTRY AND CARNIVORES	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
October 12 th 2020	TISSUE COCCIDIA	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Laboratory handouts
October 16 th 2020	BABESIA, GIARDIA	Doc.dr.sc. Franjo	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY	Laboratory handouts

		Martinković			AND PARASITIC DISEASES WITH CLINICS 12-14 h	
October 20 th 2020	LEISHMANIA SPP.	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
October 23 rd 2020	TREMATODA	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
October 28 th 2020	DIAGNOSTICS OF PROTOZOAL INFECTIONS	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
October 30 th 2020	DIAGNOSTICS OF TREMATODES	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Laboratory handouts
November 2 nd 2020	TAPEWORMS OF HERBIVORES, CANINE TAPEWORMS pt. 1 ANOPLOCEPHALIDAE DYPILIDIUM CANINUM	Lea Lovrić, DVM	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
November 3 rd 2020	CANINE TAPEWORMS pt. 2, LARVAL STAGES	Lea Lovrić, DVM	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC	Laboratory handouts

					DISEASES WITH CLINICS 8-10 h	
November 9 th 2020	ECHINOCOCCOSIS, CYSTICERCOSIS	Lea Lovrić, DVM	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
November 11 th 2020	COPROLOGICAL PARASITOLOGICAL EXAMINATION pt.1	Lea Lovrić, DVM	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 15-17 h	Laboratory handouts
November 20 th 2020	INTRODUCTION NEMATODES, ASCARIDAE, OXYURIDAE	Lea Lovrić, DVM	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
November 23 rd 2020	ANCYLOSTOMATIDAE STRONGYLIDAE	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 12-14 h	Laboratory handouts
November 25 th 2020	LUNGWORMS, TRICHURIS SP.	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 16-18 h	Laboratory handouts
November 26 th 2020	COPROLOGICAL PARASITOLOGICAL EXAMINATION pt.2	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC	Laboratory handouts

					DISEASES WITH CLINICS 14-16 h	
December 1 st 2020	TRICHOSTRONGYLIDAE STRONGYLOIDES	Lea Lovrić, DVM	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
December 4 th 2020	DIAGNOSTICS OF TRICHINELLOSIS pt.1 TRICHINELOSCOPY	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
December 8 th 2020	DIAGNOSTICS OF TRICHINELLOSIS pt.2 ARTIFICIAL DIGESTION	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 15-17 h	Laboratory handouts
December 10 th 2020	COPROLOGICAL PARASITOLOGICAL EXAMINATION pt.3	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 15-17 h	Laboratory handouts
December 15 th 2020	DIROFILARIA SPP.	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
December 18 th 2020	HARD AND SOFT TICKS	Doc.dr.sc. Franjo	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY	Laboratory handouts

		Martinković			AND PARASITIC DISEASES WITH CLINICS 12-14 h	
January 7 th 2021	MANGE pt.1	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
January 8 th 2021	MANGE pt.2	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	Laboratory handouts
January 12 th 2021	BLOOD SUCKING INSECTS, LICE, FLEAS, SHEEP KED	Doc.dr.sc. Franjo Martinković	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Laboratory handouts
January 15 th 2021	FACULTATIVE AND OBLIGATORY MYIASIS	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	Laboratory handouts
January 18 th 2021	VECTORS AND MOLESTANTS	Prof.dr.sc. Albert Marinculić	Laboratory work	1,2	DEPARTMENT OF PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 14-16 h	
January	DIAGNOSTICS IN	Doc.dr.sc.	Laboratory	1,2	DEPARTMENT OF	Laboratory handouts

19 th 2021	CLINICAL PARASITOLOGY	Franjo Martinković	work		PARASITOLOGY AND PARASITIC DISEASES WITH CLINICS 8-10 h	
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STUDENT OBLIGATIONS

Lecture attendance	During the course the student must attend 17 lecture hours in order to gain 3 minimal points. Maximally can gain 6 points.
Seminars attendance	
Practicals attendance	During the course the student must attend 40 (out of 56) exercise lessons (20 programmes out of 28 programmes) in order to gain 8 minimal points. Maximal points that student can gain is 12. Non attendance 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 four times by students engagement or by teachers choice. At each test, student can gain 1.5 points. After completion of chapters Protozoa, Cestoda, Trematoda, Nematoda, knowledge and skills to perform coprological examination (colloquium " Coprological examination) will be tested. Within this test, student can gain 4 points. Maximal points for the activity at practicals is 10. Minimal points for the activity at practicals is 5. In order to collect minimum number of points, student must pass the colloquium " Coprological examination" and collect 1.5 points among short oral tests. Students will receive materials to prepare the practical on time.
Final exam	At the final exam the student answers the questions orally. Minimal examination points are 24. Maximal examination points are 40.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine. Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam. Article 45: a student can justifiably be absent from up to 50 % of the lectures; 30% of the seminars and 30 % of the exercises.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	During the course there will be 4 knowledge assessments with 20 questions.
Final exams (dates)	January 27 th 2021
Form of final exam	At the final exam the student answers the questions orally.

LITERATURE

Obligatory literature	Veterinary Clinical Parasitology, A. Zajac, G. Conboy, 2012.
	Essentials of Veterinary Parasitology, H.M. Eisekha, N.A. Khan, 2011
	Focus on Small Animal Parasitology, M. Fisher, J. MacGarry, 2006
Optional literature	<ol style="list-style-type: none"> 1. Laboratory Procedures, 2002. 4th edition C. M. Hendrix, 2. Small animal clinical diagnosis by laboratory methods, Willard – Tvedten, 2004., 4th edition

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.
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Learning outcomes

By the end of this course students should be able to demonstrate:

- detailed knowledge and understanding of the biology, life cycles, pathogenesis, and diagnosis of parasitic infections in animals and their relevance for human health and control
- detailed knowledge and understanding of the biology and strategies for control of animal parasites
- carry out practical laboratory identification of parasite stages
- specialised skills in: advanced diagnostic, chemotherapeutic, ecological and/or control aspects of the subject

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:

Prof.dr.sc. Albert Marinculić

Head of Department/Clinic:

Prof.dr.sc. Dagny Stojčević Jan

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

Kolegij:

GRADING SCHEME CONCERNING ACTIVITY AND RESULTS DURING THE COURSE

Type of activity	Minimal number of points	Maximal number of points
Lecture attendance	3	6
Practical attendance	8	12
Activity during practicals	5	10
Continuing knowledge assessment	20	32
Final exam	24	40
Totally	60	100