

2022-2023

COURSE NAME

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
Heinzelova 55
Tel. 01/2390373
Division for Public Health and Food Safety
Email: nrudan@vef.hr
Register no.:
File no.:
Zagreb, 14 september 2023



170730	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	14.09.2023	
Klasifikacijska oznaka	Org. jed.	
605-03/23-04/28	251-61-32;	
Uredbeni broj	Prilozi	Vrijednost
251-61-08/303-23-35	0	-

COURSE SYLLABUS

Course name: Special Microbiology

Academic year 2023-24

Course leader: Nevenka Rudan, full professor

Teachers: Nevenka Rudan, full professor; Selma Pintarić, associate professor; Marija Cvetnić, assistant

Associate teachers:

First day of classes: 2/ 10/ 2023

Last day of classes: 13/ 12/ 2023

Activities - Special Microbiology (1/3)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
02/10/2023	12:00	13:30	p01 Enterobacteriaceae	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_patologija
03/10/2023	12:00	13:30	p02 Spiral bacteria, Mycoplasmas	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_patologija
05/10/2023	12:00	13:30	s01 Burkholderia spp.	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_patologija
09/10/2023	12:05	13:35	s02 Chlamydia; Riketsia; Haemophylus	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_patologija
11/10/2023	8:15	9:45	v01 E, coli, Klebsiella, Salmonella	5E-3		1:30	Pintaric S.	V_mikrobiologija
11/10/2023	12:45	14:15	v01 E, coli, Klebsiella, Salmonella	5E-1, 5E-2		1:30	Pintaric S.	V_mikrobiologija
12/10/2023	8:15	9:45	v02 Proteus, Yersinoia, Citrobacter	5E-1, 5E-2		1:30	Pintaric S.	V_mikrobiologija
12/10/2023	10:00	11:30	p03 Bacillus spp., Clostridium spp.	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_patologija
12/10/2023	12:05	13:35	v02 Proteus, Yersinoia, Citrobacter	5E-3		1:30	Pintaric S.	V_mikrobiologija
13/10/2023	12:05	13:35	v03 Pseudomonas spp.	5E-1, 5E-2		1:30	Pintaric S.	V_mikrobiologija
13/10/2023	14:00	15:30	v03 Pseudomonas spp.	5E-3		1:30	Pintaric S.	V_mikrobiologija
16/10/2023	8:15	9:45	s03 Mycobacteria, Brucella spp.	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_kemija
17/10/2023	10:00	11:30	v04 Bacillus spp., Clostridium spp.	5E-3		1:30	Cvetnic M.	V_mikrobiologija
17/10/2023	12:00	13:30	v04 Bacillus spp., Clostridium spp.	5E-1, 5E-2		1:30	Cvetnic M.	V_mikrobiologija

Activities - Special Microbiology (2/3)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
18/10/2023	12:00	13:30	v05 Pasteurella spp., Mannheimia	5E-1, 5E-2		1:30	Pintaric S.	V_mikrobiologija
19/10/2023	8:15	9:45	v05 Pasteurella spp., Mannheimia	5E-3		1:30	Pintaric S.	V_mikrobiologija
19/10/2023	10:00	11:30	s04 Yeasts, Fungi	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_patologija
19/10/2023	12:00	13:30	v06 Acinetobacter, Moraxella	5E-1, 5E-2		1:30	Pintaric S.	V_mikrobiologija
20/10/2023	8:15	9:45	v06 Acinetobacter, Moraxella	5E-3		1:30	Pintaric S.	V_mikrobiologija
24/10/2023	8:15	9:45	v07 Listeria, Erysipelothrix	5E-1, 5E-2		1:30	Rudan N.	V_mikrobiologija
24/10/2023	10:00	11:30	v07 Listeria, Erysipelothrix	5E-3		1:30	Rudan N.	V_mikrobiologija
27/10/2023	12:00	13:30	v08 Campylobacter spp.	5E-3		1:30	Cvetnic M.	V_mikrobiologija
27/10/2023	14:00	15:30	v08 Campylobacter spp.	5E-1, 5E-2		1:30	Cvetnic M.	V_mikrobiologija
30/10/2023	14:00	15:30	p04 Staphylococcus, Streptococcus	5E-1, 5E-2, 5E-3		1:30	Pintaric S.	P_fizika
31/10/2023	8:15	9:45	s05 Herpesviridae, Picornaviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_fizika
06/11/2023	10:00	11:30	v09 Corynebacterium, Trueperella	5E-3		1:30	Rudan N.	V_mikrobiologija
07/11/2023	8:15	9:45	v09 Corynebacterium, Trueperella	5E-1, 5E-2		1:30	Rudan N.	V_mikrobiologija
07/11/2023	12:00	13:30	s06 Flaviviridae, Rhabdoviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_patologija
08/11/2023	14:00	15:30	v10 Staphylococcus spp.	5E-3		1:30	Rudan N.	V_mikrobiologija
09/11/2023	8:15	9:45	v10 Staphylococcus spp.	5E-1, 5E-2		1:30	Rudan N.	V_mikrobiologija
14/11/2023	12:00	13:30	v11 Streptococcus spp.	5E-3		1:30	Rudan N.	V_mikrobiologija

Activities - Special Microbiology (3/3)								
Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
16/11/2023	8:15	9:45	v11 Streptococcus spp.	5E-1, 5E-2		1:30	Rudan N.	V_mikrobiologija
20/11/2023	12:00	13:30	v12 Yeasts	5E-1, 5E-2		1:30	Cvetnic M.	V_mikrobiologija
20/11/2023	14:00	15:30	v12 Yeasts	5E-3		1:30	Cvetnic M.	V_mikrobiologija
21/11/2023	10:00	11:30	v13 Fungi	5E-3		1:30	Cvetnic M.	V_mikrobiologija
23/11/2023	10:00	11:30	v13 Fungi	5E-1, 5E-2		1:30	Cvetnic M.	V_mikrobiologija
28/11/2023	8:15	9:45	v14 CPE of viruses	5E-3		1:30	Rudan N.	V_mikrobiologija
29/11/2023	14:00	15:30	v14 CPE of viruses	5E-1, 5E-2		1:30	Rudan N.	V_mikrobiologija
04/12/2023	14:00	15:30	p05 Orthomyxoviridae, Paramyxoviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_fizika
05/12/2023	12:00	13:30	p06 Poxviridae, Parvoviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_patologija
06/12/2023	8:15	9:45	v15 Virus titration	5E-3		1:30	Rudan N.	V_mikrobiologija
06/12/2023	10:00	11:30	p07 Papillomaviridae, Circoviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_fizika
06/12/2023	11:30	12:15	p08 Transmissible Spongiform Encephalopathies	5E-1, 5E-2, 5E-3		0:45	Rudan N.	P_patologija
06/12/2023	12:15	13:45	v15 Virus titration	5E-1, 5E-2		1:30	Rudan N.	V_mikrobiologija
11/12/2023	14:00	15:30	s07 Reoviridae, Arteriviradae, Adenoviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_kemija
13/12/2023	14:00	15:30	s08 Retroviridae, Coronaviridae	5E-1, 5E-2, 5E-3		1:30	Rudan N.	P_kemija
Total: 46						68:15		

STUDENT OBLIGATIONS

Lecture attendance	Total of 15 lecture hours will hold out. Student must assemble at least 3 points (8 hours of lectures) and can gather at the most of 6 points (15 hours of lectures).
Seminars attendance	Total of 15 hours of seminars will hold out. Student must assemble at least 4 points (10 hours of seminars) and can gather at the most of 6 points (15 hours of seminars).
Practicals attendance	Total of 30 hours of laboratory practice will hold out. Student must assemble at least 8 points (20 hours of exercises) and can gather at the most of 12 points (30 hours of exercises).
Active participation in seminars and practicals	Student must assemble at least 5 points for active participation in exercises, which involve two correct answers on the verbal putting questions. The most of 10 points involve four correct answers on the verbal putting questions.
Final exam	For approaching to final exam, student must assemble at least 36 points from these segments of teaching: lecture attendance, practical attendance, active participation in practicals and continuous knowledge-checking. Final exam is in written form and consists of 40 questions. Student must assemble at least 24 points from final exam and at the most of 40 points.
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)	1. Preliminary exam will be hold at 6.11. and 7.11.2023. 2. Preliminary exam will be hold at 6.12.2023.
Final exams (dates)	15/12/2023; 9/2/2024; 20/2/2024.
Form of final exam	Written form

LITERATURE

Obligatory literature	Quinn, P. J., M. E. Carter, B. K. Markey, G. R. Carter (1994): Clinical Veterinary Microbiology. M. Wolfe, London. Quinn, P. J., B. K. Markey, F. C. Leonard, E. S. FitzPatrick, S. Fanning, P. J. Hartigan (2011): Veterinary Microbiology and Microbial Diseases. Wiley-Blackwell, Ltd Publication, UK. Park Talaro, K. ((2005): Microbiology, Basic Principles. Mc Graw Hill, USA
Optional literature	Quinn, P. J., B. K. Markey, M. E. Carter, W. J. Donnelly, F. C. Leonard (2002): Veterinary Microbiology and Microbial Disease. Blackwell Science, UK.

OBJECTIVES AND LEARNING OUTCOMES


Course objectives	The Special Microbiology courses taught to third-year veterinary medical students via sixteen didactic lectures, fourteen hours of seminars and thirty hours of laboratory practicals. Students get familiar with basic characteristics of major microorganisms as causers of infectious diseases in domestic animals and man. Students will master with basic microbiological techniques for their isolation and identification, with methods of taking and sending materials for microbiological examinations, technics of preparing the microscopic slides (non-painted and painted). During this course, students become familiar with procedures of smearing materials on the media for cultivating
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	microorganisms, with specific qualities of their identifications on the basis of morphological, growing, physiological and antigenic properties. Further, they will get to know the relations between various microorganisms and antimicrobial agents with immunoprophylactic possibilities.
Learning outcomes	<ol style="list-style-type: none">1. Understanding the basic principles and techniques for isolation and identification of pathogenic microorganisms, and what diagnostic tests should be performed for their identification;2. Interpreting the meaning of the results of microbiological examination in the process of etiological diagnosis of infectious diseases, information of classification the bacteria, viruses and fungi with genera and species important for veterinary medicine;3. Knowledge about specifics of microorganism grows, pathogenic properties of microorganisms and diseases that causes;4. Understanding what specimens should be collected for laboratory diagnostic procedures, and be acquainted with preventive and therapeutic strategies.

GRADING SCHEME

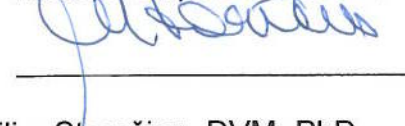
<i>Points</i>	<i>Grade</i>
Up to 59	1 (F)
60-68	2 (E)
69-76	2 (D)
77-84	3 (C)
85-92	4 (B)
93-100	5 (A)

Course leader:



Prof Nevenka Rudan, DVM, PhD

Head of Department/Clinic:



Prof vilim Starešina, DVM, PhD

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