

UNIVERSITY OF ZAGREB  
 FACULTY OF VETERINARY MEDICINE  
 Heinzlova 55  
 Tel. 01/2390312  
 Division: Clinics  
 Organizational unit: Veterinary Pathology  
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 Register No. of the organisational unit:  
 Zagreb, 29/1/2026



214943	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primijeno:	30.01.2026	
Klasifikacijska oznaka	Org. jed.	
602-04/25-22/34	251-61-41;	
Uradžbeni broj	Prilozi	Vrijednost
251-61-11/378-26-161	0	-

## COURSE SYLLABUS

Course name: SPECIAL VETERINARY PATHOLOGY

Academic year 2025-26

Course leader: Ivan-Conrado Šoštarić-Zuckermann, PhD, DECVP, Associate professor  
Deputy course leader: Andrea Gudan Kurilj, PhD, DECVP, Full professor

Teachers: Andrea Gudan Kurilj, PhD, DECVP, Full professor; Ivan-Conrado Šoštarić-Zuckermann, PhD, DECVP, Associate professor; Lidija Medven Zagradišnik, PhD, Assistant professor; Ivana Mihoković Buhin, DVM; Iva Ciprić, DVM;

First day of classes: 25/2/2026.

Last day of classes: 27/5/2026.

### Activities - Special Veterinary Patology (1/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
25/02/2026	10:00	11:30	p01 Alimentary system 1	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
26/02/2026	12:00	13:30	p02 Alimentary system 2	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
27/02/2026	9:45	11:15	p03 Alimentary system 3	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
02/03/2026	10:00	12:15	v01 Necropsy 1	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
03/03/2026	10:00	11:30	p04 Liver	6E-1, 6E-2, 6E-3		1:30	Šošćarić Z. I.	P_patologija
04/03/2026	9:45	11:15	p05 Pancreas	6E-1, 6E-2, 6E-3		1:30	Šošćarić Z. I.	P_patologija
04/03/2026	11:30	13:45	v03 Necropsy 3	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
05/03/2026	8:00	9:30	p06 Respiratory system 1	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
06/03/2026	10:00	11:30	p07 Respiratory system 2	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
09/03/2026	10:45	13:00	v02 Necropsy 2	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
09/03/2026	13:15	14:45	p08 Respiratory system 3	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
11/03/2026	8:00	9:30	p09 Cardiovascular system 1	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
11/03/2026	11:15	13:30	v04 Necropsy 4	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
13/03/2026	10:00	11:30	p10 Cardiovascular system 2 + digitalization	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
16/03/2026	8:00	9:30	p11 Urinary system 1	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
16/03/2026	12:30	14:45	v05 Necropsy 5	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
18/03/2026	9:45	11:15	p12 Urinary system 2	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija

### Activities - Special Veterinary Patology (2/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
18/03/2026	11:45	14:45	v11 Histopathology 1	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
19/03/2026	8:00	9:30	p13 Urinary system 3	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
20/03/2026	11:15	12:45	p14 Hemolymphatic system 1	6E-1, 6E-2, 6E-3		1:30	Šoštarić Z. I.	P_kemija
23/03/2026	8:00	11:00	v12 Histopathology 2	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
25/03/2026	8:00	9:30	p15 Hemolymphatic system 2	6E-1, 6E-2, 6E-3		1:30	Šoštarić Z. I.	P_patologija
26/03/2026	8:00	9:30	p16 Hemolymphatic system 3	6E-1, 6E-2, 6E-3		1:30	Šoštarić Z. I.	P_patologija
27/03/2026	9:45	12:00	v06 Necropsy 6	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
30/03/2026	11:30	14:30	v13 Histopathology 3	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
31/03/2026	8:15	9:45	p17 Nervous system 1	6E-1, 6E-2, 6E-3		1:30	Šoštarić Z. I.	P_patologija
07/04/2026	8:00	10:15	v07 Necropsy 7	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
08/04/2026	12:00	13:30	p18 Nervous system 2	6E-1, 6E-2, 6E-3		1:30	Šoštarić Z. I.	P_fizika
09/04/2026	8:00	9:30	p19 Nervous system 3	6E-1, 6E-2, 6E-3		1:30	Šoštarić Z. I.	P_fizika
10/04/2026	10:00	12:15	v08 Necropsy 8	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
13/04/2026	10:00	12:15	v09 Necropsy 9	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
14/04/2026	8:00	9:30	p20 Skin 1	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
14/04/2026	10:00	13:00	v14 Histopathology 4	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika

### Activities - Special Veterinary Patology (3/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
17/04/2026	8:00	9:30	p21 Skin 2	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
21/04/2026	8:00	10:15	v10 Necropsy 10	6E-1, 6E-2, 6E-3		2:15	Nastavnici na predmetu	S_patologija
22/04/2026	9:45	11:15	p22 Skin 3	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
23/04/2026	11:45	14:45	v15 Histopathology 5	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
27/04/2026	8:00	9:30	p23 Male reproductive system	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
04/05/2026	9:45	11:15	p24 Female reproductive system 1	6E-1, 6E-2, 6E-3, P_patologija		1:30	Medven Z. L.	P_patologija
06/05/2026	8:15	11:15	v16 Histopathology 6	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
07/05/2026	8:00	9:30	p25 Female reproductive system 2	6E-1, 6E-2, 6E-3, P_patologija		1:30	Medven Z. L.	P_amfiteatar
08/05/2026	8:45	11:45	v17 Histopathology 7	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
11/05/2026	8:00	9:30	p26 Endocrine system 1	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
12/05/2026	8:15	11:15	v18 Histopathology 8	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
13/05/2026	8:00	9:30	p27 Endocrine system 2	6E-1, 6E-2, 6E-3		1:30	Medven Z. L.	P_patologija
15/05/2026	8:00	9:30	p28 Muscular system	6E-1, 6E-2, 6E-3		1:30	Gudan Kurilj A.	P_patologija
15/05/2026	9:45	12:45	v19 Histopathology 9	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
20/05/2026	8:00	9:30	p29 Bones and Joints	6E-1, 6E-2, 6E-3		1:30	Šošćarić Z. I.	P_patologija
22/05/2026	8:00	9:30	p30 Eye	6E-1, 6E-2, 6E-3		1:30	Šošćarić Z. I.	P_patologija

### Activities - Special Veterinary Patology (4/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
22/05/2026	9:45	12:45	v20 Histopathology 10	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
25/05/2026	8:15	11:15	v21 Histopathology 11	6E-1, 6E-2, 6E-3		3:00	Nastavnici na predmetu	V_fizika
27/05/2026	8:15	9:15	v22 Histopathology 12 - Colloquium	6E-1, 6E-2, 6E-3		1:00	Nastavnici na predmetu	V_fizika
Total: 52						101:30		

**STUDENT OBLIGATIONS**

Lecture attendance	The total number of lectures include 60 hours. During sixth semester student must be present on at least 30 hours (50%) of lectures to get minimal 3 points (each lecture hour is calculated as 0.1 points). A student can get a maximum of 6 points for this element.			
Practicals attendance	The total number of practicals include 75 hours. During the sixth semester student must be present on at least 52 hours of practicals to get a minimum of 8 points. A student can get a maximum of 12 points for this element.			
Active participation in seminars and practicals	In this element, student must achieve a minimum of 5 points, and can achieve a maximum of 10 points. Active participation in practicals will be awarded according to the lower tables: <b>Activity on necropsy practicals:</b>			
	1	Correctly performs the necropsy technique	0	0,1
	2	Correctly names and describes the topographical regions and anatomical structures within them.	0	0,1
	3	Correctly names and describes postmortem changes	0	0,1
	4	Recognizes macroscopic pathological changes	0	0,1
	5	Correctly names and describes macroscopic pathological changes	0	0,1
	6	Formulates a morphological diagnosis/etiological diagnosis/disease name.	0	0,1
	7	Connects and classifies macroscopic pathological changes, links them with possible causes/identifies the disease.	0	0,1
	8	Correctly collects tissue samples for histopathological examination and clearly communicates the method of sending samples for histopathological examination.	0	0,1
	9	Correctly collects samples for other additional laboratory tests and clearly communicates the method of sending samples for other additional laboratory tests (microbiological, toxicological, parasitological)	0	0,1
	10	Overall impression: overall dissection skill, professionalism, theoretical knowledge	0	0,1
	1	The necropsy report contains all the required sections	0	0,2
2	It is written accurately, in complete sentences and fluently, in clear and labeled sections (according to the instructions/example)	0	0,2	

3	Pathological changes are described clearly and precisely	0	0,2
4	Morphological diagnoses are derived from the described pathological changes, and everything is summarized in the final conclusion.	0	0,2
5	Overall impression, style.	0	0,2

During necropsy practicals, a student may perform two (2) to four (4) necropsies. To obtain the minimum number of points for this component, the student is required to perform at least two (2) necropsies, while to obtain the maximum number of points (4), the student must perform four necropsies. For each completed necropsy, the student may earn up to 1 point. As part of one of these necropsies, the student must write a necropsy report, for which an additional point may be awarded. **A recorded and graded necropsy report is a prerequisite for taking the final examination.**

#### Activity – histopathology practicals

1	Recognizes the organ at the histological level	0	0,1
2	Correctly names the parts of the tissue/organ at the histological level	0	0,1
3	Recognizes basic pathological processes at the histological level	0	0,1
4	Describes basic pathological processes at the histological level	0	0,1
5	Formulates a morphological/etiological diagnosis/disease name of the process	0	0,1

Histopathology practicals are program-based. Prior to attending the practicals, students are required to prepare according to the instructions (e.g., study the histological structure of tissues/organs, read the relevant textbook chapter, review the teaching materials, etc.). The topics for the practicals will be available in the course folder on Merlin.

For histopathology practicals, students must bring a printed A4 sheet (available in the practicals folder of the course on Merlin) containing the specified parameters that will be addressed during the practicals. For each practical, a student may earn 0.5 points (maximum of 5 points for 10 practicals), and the minimum required from this component is 2 points. In addition, students may bring a separate notebook for taking notes and making sketches during the practicals.

#### Final exam

Minimal conditions for passing the first, second, third and fourth evaluation elements are all summed up and they are worth 36 points all together. In order to take the final exam a student must gain the 36 points. **The final exam consists of a written and oral part. Written part of**

	<p>the final exam will last for 60 minutes, and consists of two parts. The first part is recognition of macroscopic pathological changes (duration: 20 minutes). In this part, 10 photographs of pathological processes (one photo at 2 minutes intervals) will be displayed on the LCD projector. For each photo, up to two questions will be asked, and the student can get maximum of 0.5 point per photograph (points are awarded in range from 0.25 to 0.5). The second part of the written exam is in the essay form. Each question will have guidelines to clarify what is expected in answers. Students will briefly describe some pathological processes. This part of the exam contains of 4 questions, and each question will be scored with a maximum of 5 points. A minimum of 15 points is required to pass the written exam, while a maximum of 25 points is possible. After scoring the written part of the exam, <b>students who received a minimum number of points (15) have the right to access the oral part of the exam</b>, while those who have a lower number of points receive a negative grade and do not have the right to access the oral part of the exam. Additional oral questions are answered according to the same principles as essay-type questions in the written part of the exam, and in the oral part it is possible to achieve a maximum of 15 points. The final grade in the final examination is determined by the total number of points the student has accumulated by answering questions in both the written and oral parts of the exam. In order to pass the exam, the student must achieve a minimum combined total of 24 points from the written and oral parts, while the maximum possible is 40 points. Regardless of whether the number of points achieved in the first four assessment elements exceeds 36, the student must demonstrate at least sufficient knowledge in the final examination. The minimum number of points the student must achieve on the final examination is 24 in order to reach the overall minimum of 60 points.</p>
Examination requirements	<p>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. <b>Article 41:</b> a student can justifiably be absent from up to 50% of the lectures; 30% of the seminars and 30% of the exercises.</p>

### GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (colloquiums or mid-terms)	<p><b>Diagnostic practicals - necropsy</b></p> <p>The student is required to complete four diagnostic practicals (during 30 hours of necropsy practicals) by actively following the necropsy and participating in the discussion, and by completing a diagnostic</p>
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assignment as homework. Depending on the disease identified at necropsy, the assignment consists of answering the given questions. The questions may include: establishing a morphological and/or etiological diagnosis or the name of the disease/condition based on images of pathological changes identified at necropsy; providing a brief histopathological description of the lesion; defining the cause and pathogenesis of the disease; describing the consequences of the disease, and similar tasks.

Each student must complete four diagnostic practicals, and for each successfully completed practical the student may receive a maximum of 4 points (4 practicals × 4 points per practical = 16 points). A minimum of 10 points is required for the diagnostic practicals to be considered successfully completed.

#### Practical colloquium in Histopathology.

Practical colloquium in Histopathology	
DATE OF COLLOQUIUM	Registrations:
27 <sup>th</sup> of May 2026 According to the "activities"	Registration is not needed
8 <sup>th</sup> of June 2026 at 8:00 (First repeated colloquium)	Registration by sending Email to <a href="mailto:agudan@vef.unizg.hr">agudan@vef.unizg.hr</a> till 5 <sup>th</sup> of June 2026
16 <sup>th</sup> of June 2026 at 8:00 (Second repeated colloquium)	Registration by sending Email to <a href="mailto:agudan@vef.unizg.hr">agudan@vef.unizg.hr</a> till 15 <sup>th</sup> of June 2026

In the histopathology colloquium (midterm exam), the student is given four histopathological slides, and for each slide a maximum of 4 points may be awarded: identification of the organ – 1 point; description of histopathological changes – 2 points; diagnosis – 1 point. In this way, the student may obtain a maximum of 16 points, and must obtain at least 10 points for the colloquium to be considered passed.

Final exams (dates)	12.5.2026.; 15.6.2026.; 1.7.2026.; 9.9.2026.; 22.9.2026.
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Form of final exam	Written and oral exam.
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#### LITERATURE

Obligatory literature	1. ZACHARY, J. F. (2022): Pathologic Basis of Disease, 7th edition, Elsevier, Philadelphia. 2. Notes and presentations provided by lecturers.
Optional literature	1. GRABAREVIĆ, Ž., SABOČANEC, R. (2016): Osnove razudbe domaćih životinja, Medicinska naklada, Zagreb.

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|  | 2. JUBB, KENNEDY, PALMER, MAXIE, G. M. (2015): Pathology of Domestic Animals, 6th ed., Saunders Elsevier. |
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### OBJECTIVES AND LEARNING OUTCOMES

<b>Course objectives</b>	At the end of the course students will get knowledge in pathology of organic systems necessary for further performing of education in other clinical subjects. The final goal upon the end of the studying is to be able to recognise a pathological process, make a right diagnosis and give the proper therapy, or if the animal perishes to get the right diagnosis in a proper way (by autopsy and other laboratory studies) thus act as a preventive measure for other animals.
<b>Learning outcomes</b>	By the completion of the course students should be able to: <ul style="list-style-type: none"> <li>- recognize, connect and classify macroscopic pathological changes, identify the disease and formulate a diagnosis</li> <li>- analyze microscopic slides of basic pathologic processes and most important animal diseases</li> <li>- correlate macroscopic and microscopic changes together with the results of other ancillary laboratory tests</li> <li>- make diagnosis and conclusion about emergence and development of disease or animal death</li> <li>- write necropsy report</li> </ul>

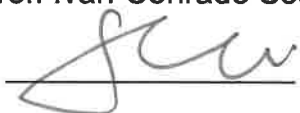
### GRADING SCHEME

<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)

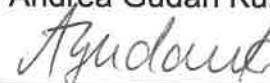
Course leader:

Assoc. prof. Ivan-Conrado Šoštarić-Zuckermann, DECVP



Head of organizational unit:

Full prof. Andrea Gudan Kurilj, DECVP



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

**GRADING AND EVALUATION OF STUDENT WORK ON COURSES WITH LECTURES, SEMINARS and PRACTICALS**

Type of activity	Minimum number of points	Maximum number of points
Lectures attendance	3	6
Seminar attendance	4	6
Practicals attendance	4	6
Active participation in seminars and practicals	5	10
Continuous knowledge checking (mid-terms)	20	32
Final exam	24	40
<b>TOTAL</b>	<b>60</b>	<b>100</b>

**GRADING AND EVALUATION OF STUDENT WORK ON COURSES WITH LECTURES and SEMINARS**

Type of activity	Minimum number of points	Maximum number of points
Lecture attendance	3	6
Practicals attendance	8	12
Active participation in practicals	5	10
Continuous knowledge checking (mid-terms)	20	32
Final exam	24	40
<b>TOTAL</b>	<b>60</b>	<b>100</b>

**GRADING AND EVALUATION OF STUDENT WORK ON COURSES WITH SEMINARS and EXERCISES**

Type of activity	Minimum number of points	Maximum number of points
Seminar / practicals attendance	11	18
Active participation in seminars and practicals	5	10
Continuous knowledge checking (mid-terms)	20	32
Final exam	24	40
<b>TOTAL</b>	<b>60</b>	<b>100</b>