

UNIVERSITY OF ZAGREB  
FACULTY OF VETERINARY MEDICINE

Heinzlova 55

Tel. 01 2390 111

Division:

Organizational unit: Clinic for surgery, orthopaedics and ophthalmology

E-mail of the course leader: amusulin@vef.unizg.hr

Register No of the organisational unit:

Zagreb, 13/2/2025

	
198360	REPUBLIKA HRVATSKA
Veterinarski fakultet u Zagrebu	
Primljeno:	17.02.2025
Klasifikacijska oznaka	Org. jed.
602-04/24-22/38	251-61-41:251-61-32
Uredžbeni broj	Prilozi   Vrijednost
251-61-21-25-178	0   -

### COURSE SYLLABUS

Course name: Surgery II

Academic year 2024/2025

Course leader: Assoc. Prof. Andrija Musulin, PhD

Deputy course leader: Prof. Boris Pirkić, PhD

Teachers: Prof. Dražen Matičić PhD FCA, PhD; Prof. Boris Pirkić; PhD;.. Prof. Mario Kreszinger, PhD; Prof. Dražen Vnuk; PhD;  
Assoc. Prof. Ozren Smolec, PhD, Assoc. Prof. Nika Brkljača Bottegaro; PhD, Assoc. Prof. Marko Pećin, PhD, Assoc. Prof. Andrija  
Musulin; PhD; Valentina Plichta, PhD, DVM, Petar Kostešić, PhD, DVM, Assis. prof. Marija Lipar, PhD, DVM, Marija Mamić, DVM, Mirna Abaffy  
Kirin, DVM, Mirta Vučković, DVM, Petra Dmitrović, DVM, Niko Ivkić, DVM, Katarina Miljak, DVM,  
Branko Petričević, DVM, Ema Sajdl, DVM, Klara Klačterka, DVM

First day of classes: 03/03/2025

Last day of classes: 03/06/2025

Activities - Surgery, Orthopaedics and Ophthalmology II (1/3)								
Start Date	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
04/03/2025	12:00	13:30	p02 Surgery of the head	8E-1, 8E-2, 8E-3		1:30	Musulin A.	P_farmakologija
05/03/2025	11:45	13:15	p03 Hernias	8E-1, 8E-2, 8E-3		1:30	Musulin A.	P_fiziologija
06/03/2025	12:30	14:00	p04 Gastrointestinal diseases	8E-1, 8E-2, 8E-3		1:30	Vnuk D.	P_patologija
11/03/2025	11:30	13:00	p01 Castrations	8E-1, 8E-2, 8E-3		1:30	Pećin M.	P_klinike
12/03/2025	9:30	11:00	p05 Surgery of the head	8E-1, 8E-2, 8E-3		1:30	Brkljača Bottegato N.	P_fizika
14/03/2025	10:00	13:45	v01 Practical work	8E-2, V_kirurgija		3:45	Nastavnici na predmetu	V_kirurgija
17/03/2025	10:00	13:45	v01 Practical work	8E-1, V_kirurgija		3:45	Nastavnici na predmetu	V_kirurgija
19/03/2025	9:45	13:30	v01 Practical work	8E-3, V_kirurgija		3:45	Nastavnici na predmetu	V_kirurgija
21/03/2025	10:00	15:15	v02 Practical work	8E-1		5:15	Nastavnici na predmetu	V_kirurgija
25/03/2025	8:30	13:45	v03 Practical work	8E-1		5:15	Nastavnici na predmetu	V_kirurgija
25/03/2025	15:00	16:30	p06 Surgical diseases	8E-1, 8E-2, 8E-3		1:30	Vnuk D.	P_klinike
26/03/2025	15:00	16:30	p07 Surgical oncology I	8E-1, 8E-2, 8E-3		1:30	Matičić D.	P_klinike
27/03/2025	9:45	11:15	p08 Surgical oncology II	8E-1, 8E-2, 8E-3		1:30	Matičić D.	P_klinike
31/03/2025	18:00	21:45	v07 Practical work	8E-1		3:45	Nastavnici na predmetu	V_kirurgija
03/04/2025	9:00	14:15	v04 Practical work	8E-1		5:15	Nastavnici na predmetu	V_kirurgija
04/04/2025	9:00	14:15	v05 Practical work	8E-1		5:15	Nastavnici na predmetu	V_kirurgija



Activities - Surgery, Orthopaedics and Ophthalmology II (2/3)								
Start Date	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
07/04/2025	10:00	11:30	p09 Diseases of cornea	8E-1, 8E-2, 8E-3		1:30	Pirkić B.	P_klinike
08/04/2025	11:45	13:15	p10 Diseases of vascular eye	8E-1, 8E-2, 8E-3		1:30	Pirkić B.	P_klinike
09/04/2025	9:15	14:30	v06 Practical work	8E-1		5:15	Nastavnici na predmetu	V_kirurgija
14/04/2025	11:00	12:30	p11 Diseases of retina	8E-1, 8E-2, 8E-3		1:30	Pirkić B.	P_klinike
15/04/2025	9:00	14:15	v02 Practical work	8E-2		5:15	Nastavnici na predmetu	V_kirurgija
22/04/2025	8:00	13:15	v03 Practical work	8E-2		5:15	Nastavnici na predmetu	V_kirurgija
23/04/2025	9:00	14:15	v04 Practical work	8E-2		5:15	Nastavnici na predmetu	V_kirurgija
24/04/2025	8:15	13:30	v05 Practical work	8E-2, V_kirurgija		5:15	Nastavnici na predmetu	V_kirurgija
25/04/2025	9:00	14:15	v06 Practical work	8E-2		5:15	Nastavnici na predmetu	V_kirurgija
06/05/2025	10:00	15:15	v02 Practical work	8E-3		5:15	Nastavnici na predmetu	V_kirurgija
06/05/2025	18:00	21:45	v07 Practical work	8E-3		3:45	Nastavnici na predmetu	V_kirurgija
12/05/2025	9:15	14:30	v03 Practical work	8E-3		5:15	Nastavnici na predmetu	V_kirurgija
14/05/2025	9:45	11:15	p12 Diseases of eyelids	8E-1, 8E-2, 8E-3		1:30	Pirkić B.	P_klinike
15/05/2025	8:15	9:45	p13 Surgical diseases in ruminants	8E-1, 8E-2, 8E-3		1:30	Smolec O.	P_klinike





Activities - Surgery, Orthopaedics and Ophthalmology II (3/3)								
Start Date	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
15/05/2025	10:00	15:15	v04 Practical work	8E-3		5:15	Nastavnici na predmetu	V_kirurgija
22/05/2025	8:00	9:30	p14 Colic surgery in horses	8E-1, 8E-2, 8E-3		1:30	Brkljača Bottegato N.	P_klinike
23/05/2025	12:15	13:45	p15 Diseases of urogenital system	8E-1, 8E-2, 8E-3		1:30	Vnuk D.	P_klinike
26/05/2025	10:00	15:15	v05 Practical work	8E-3, V_kirurgija		5:15	Nastavnici na predmetu	V_kirurgija
03/06/2025	10:15	15:30	v06 Practical work	8E-3		5:15	Nastavnici na predmetu	V_kirurgija
03/06/2025	18:00	21:45	v07 Practical work	8E-2		3:45	Nastavnici na predmetu	V_kirurgija
Total: 36						123:45		



### **STUDENT OBLIGATIONS**

Lecture attendance	During the semester student must be present on 15 hours of lectures (from amount of 30 hours) to obtain minimum 3 points during the semester. Maximum obtained number of points from this element is 6.
Seminars attendance	-
Practicals attendance	During the semester student must be present on 32 hours of exercises (from amount of 45 hours) to obtain minimum 8,4 points during the semester. Maximum obtained number of points from this element is 12. Sixty hours of exercise are divided in 7 days: 1. 5 hours - intestinal resection and anastomosis (wet and dry lab) and ophthalmologic examination (practical training) 2. 7 hours- clinical rotation, practical work with patient 3. 7 hours- clinical rotation, practical work with patient 4. 7 hours- clinical rotation, practical work with patient 5. 7 hours- clinical rotation, practical work with patient 6. 7 hours- clinical rotation, practical work with patient 7. 5 hours- practical work with patients during night duty and /or weekend duty
Active participation in seminars and practicals	Participating actively at the practicals students can gain 75 points max., what brings them 10 final points. Points for performing the following tasks: a) 25 points (first exercise – thematic – participation is not evaluated, second exercise –practical clinical work during clinical rotation - 5 points max.; third exercise - practical clinical work during clinical rotation - 5 points max.; fourth exercise – practical clinical work during clinical rotation - 5 points max.; fifth exercises – practical clinical work during clinical rotation - 5 points max.; sixth exercise - practical clinical work during clinical rotation - 5 points max., seventh exercise – practical clinical work during clinical rotation will not be evaluated, but could be replaced with practical work in extracurricular time eg. afternoon round, night round or weekend round,) = keeping records of anaesthesiologic protocols in an orderly manner. Please find instructions to fill in the Anaesthesiologic protocol at Merlin 2024/25. b) 25 points (first exercise – thematic – participation is not evaluated, second exercise –practical clinical work during clinical rotation - 5 points max.; third exercise - practical clinical work during clinical rotation - 5 points max.; fourth exercise – practical clinical work during clinical rotation - 5 points max.; fifth exercises – practical clinical work during clinical rotation - 5 points max.; sixth exercise - practical clinical work during clinical rotation - 5 points max., seventh exercise – practical clinical work during clinical rotation will not be evaluated, but could be replaced with practical work in extracurricular time eg. afternoon round, night round or weekend round,) = keeping surgical record form in an orderly manner. Please find instructions to fill in the Patient protocol at Merlin 2024/25. c) 25 points (first exercise – thematic – participation is not evaluated, second exercise –practical clinical work during clinical rotation - 5 points max.; third exercise - practical clinical work during clinical rotation - 5 points max.; fourth exercise – practical clinical work during



	clinical rotation - 5 points max.; fifth exercises – practical clinical work during clinical rotation - 5 points max.; sixth exercise - practical clinical work during clinical rotation - 5 points max., seventh exercise – practical clinical work during clinical rotation will not be evaluated, but could be replaced with practical work in extracurricular time eg. afternoon round, night round or weekend round,) = active participation in the work with patients. Students must obtain minimally 5 final points (37.5 points x coefficient 0.1333). Active participation at exercise during surgical rotation will be continuously evaluated.
Midterm exam	<p>During the semester there will be three (3) mid term exams (surgical oncology, thorax and ophthalmic exam) organised at the time of exercises each containing eleven (11) problems or questions. Each correctly solved problem or correctly answered question is worth one (1) point. A student must gain the total of 21 points from 3 mid term exams (minimal 7 from each mid term exam) in order to earn minimally 20 final points (21 point multiply with 0.9696). The maximal number of points a student can gain from this evaluation element is 32 final points (33 point multiply with 0.9696). A student who does not gain minimally 21 points during the semester from mid term exam has a right to take 2 makeup mid term exams only those which failed. A student who passes the makeup mid term exam with minimally 7 correct answers has a right to take the final exam.</p> <p>Mid term exams will be held during last three practicals ( out of 5 practical during rotation, not counting First the night shift). Mid-term exams: thorax, surgical oncology, ophthalmological examination).</p>
Final exam	<p>Minimal conditions for passing the first, second, third and fourth (lecture attendance, exercise (practicals) attendance, active participation in exercise, mid term exams) evaluation element are summed up and they are worth 37.6 points all together. Maximum points to gain from all 4 elements is 60. Questions in the final exam will be put in a way that a student can answer in written and oral form. In the written form there will be 20 questions divided in 5 groups (20 points), 12 of which must be answered correctly in order to take the oral exam. The maximum number of points that can be gained at the oral exam is 20 points (five questions), where maximally 4 points can be gained for 1 correct answer (0-4). The minimal number of points a student must gain at the final exam is 24 (12 points minimal at written and 12 as well at oral exam). The maximal number of points on written exam together with oral exam can be 40 points. If student does not gain minimum 12 points on written exam one can not take oral exam. If student does not gain minimum 12 points in oral exam, one fails. The final grade from a course program is expressed in quantity, by a numeric point-system value and by a grade adequate to its value in points, from 1 to 5. Student is marked by grade 1 in case she/he did not master the program course successfully, in other words grade 1 means insufficient standing.</p>
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate

	Student requirements are defined in the Regulations on the Univeristy Integrated Undergraduate and Graduate Study of Veterinary Medicine (2024). Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam: a student can justifiably be absent from up to 50% of the lectures; 30% of the seminars and 30% of the exercises.
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### GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	During practicals. Re-take in case of not passing is after the first exam term (4.7.2025.. i 8.9.2025.)
Final exam (dates)	<b>3.7.2025.,12.7.2025., 9.9.2025. i 17.9.2025.</b>
Form of final exam	Written and oral

### LITERATURE

Obligatory literature	MERLIN <a href="https://moodle.srce.hr/2024-2025/">https://moodle.srce.hr/2024-2025/</a>
Optional literature	Welch Fossum, T. (2018): Small Animal Surgery, 5th ed. 2. Auer, J.A., J.A. Stick, J.M. Kummerle, T.Prange (2019): Equine Surgery. 5th ed. 3. Kent Ames, N. (2013): Noordsy's Food Animal Surgery, 5th ed. 4. Maggs, D., P. Miller, R. Ofri (2018): Slatter's fundamentals of veterinary ophtalmology. 6th ed.

### OBJECTIVES AND LEARNING OUTCOMES

Course objectives	Objective is to introduce the student with the basic knowledge in ophthalmology, abdominal and thoracic surgery, and oncology of domestic animals.
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Learning outcomes	<p>Differentiate head and neck diseases of small and large animals and suggest a basic treatment plan and analyze indications for referral to a referral clinic.</p> <p>Determine the priority of procedures for the diagnosis and treatment of a patient with thoracic cavity disease and analyze the indications for referral to a referral clinic.</p> <p>Differentiate between certain types of hernias to establish the correct diagnosis and their treatment and analyze the indications for referral to a referral clinic.</p> <p>Differentiate between certain types of hernias to establish the correct diagnosis and their treatment and analyze the indications for referral to a referral clinic.</p> <p>Analyze diagnoses of diseases of the digestive and genitourinary systems of dogs and cats, choose the option of stabilizing the patient and analyze the indication for his referral to a referral clinic.</p> <p>To determine the basics of laparotomy and abomasal dislocation in ruminants and the possibilities of treating them.</p> <p>Assess diseases of the equine abdominal cavity that are manifested by colic, approach the team treatment of colic, choose the option for stabilizing the patient and for surgical treatment, and assess the indication for his referral to a referral clinic.</p> <p>Analyze the basic postulates of the surgical approach and treatment techniques for oncology patients and discuss the need for a multidisciplinary treatment modality.</p> <p>Analyze diagnoses, classify ocular diseases of small and large animals, propose basic treatment and treatment in cases of emergencies, and analyze the indication for surgical treatment and for its referral to a referral clinic.</p>




**GRADING SCHEME**

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

Course leader  
Assoc. Prof. A. Musulin



Head of clinic  
Prof. dr. sc. Drazen Vnuk



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