

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
Heinzelova 55
Tel. 01/2390 350
Division: Clinics
Organizational unit: Internal diseases
E-mail of the course leader: mcrnogaj@vef.unizg.hr
Register No of the organisational unit:
Zagreb, 30/1/2026



215028	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	02.02.2026	
Klasifikacijska oznaka	Org. jed.	
602-04/25-22/34	251-61-41;	
Urudžbeni broj	Prilozi	Vrijednost
251-61-20/361-26-164	0	-

COURSE SYLLABUS

Course name: Clinical propedeutics
Academic year 2025/2026

Course leader: Assoc. Prof. Martina Crnogaj

Deputy course leader: Assoc. Prof. Iva Šmit

Teachers: Full Prof. Damjan Gračner, PhD; Full Prof. Nada Kučer, PhD; Full Prof. Nikša Lemo, PhD; Full Prof. Vesna Matijatko, PhD; Full Prof. Mirna Brkljačić, PhD; Assoc. Prof. Martina Crnogaj, PhD; Assoc. Prof. Jelena Gotić, PhD; Assoc. Prof. Ivana Kiš, PhD; Assoc. Prof. Iva Šmit, PhD; Assoc. Prof. Marin Torti, PhD; Assist. Prof. Darko Grden, PhD; postdoctoral assistant Maša Efendić; postdoctoral assistant Ines Jović, PhD; postdoctoral assistant Gabrijela Jurkić Krsteska, PhD; postdoctoral assistant Filip Kajin; teaching assistant Petra Bratić; teaching assistant Katarina Marjanović; teaching assistant Elizabeta Pongrac, Blanka Beer Ljubić, PhD; Magdalena Bogović, DVM; Nejra Puvača, DVM

First day of classes: 25/2/2026

Last day of classes: 3/6/2026

Activities - Clinical propedeutics (1/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
25/02/2026	8:15	9:00	p1 Introduction lecture	6E-1, 6E-2, 6E-3		0:45	Crnogaj M.	P_klinike
26/02/2026	9:00	9:45	p4 Order of physical examination procedures	6E-1, 6E-2, 6E-3		0:45	Gotić J.	P_fizika
26/02/2026	10:00	11:30	p2 Species differences in handling, restraint, equipment	6E-1, 6E-2, 6E-3		1:30	Gračner D.	P_klinike
27/02/2026	11:15	12:00	p5 History taking techniques.	6E-1, 6E-2, 6E-3		0:45	Brkljačić M.	P_klinike
27/02/2026	12:00	12:45	p6 Habitus. Examples of taking medical records.	6E-1, 6E-2, 6E-3		0:45	Crnogaj M.	P_klinike
27/02/2026	12:45	13:30	p3 Basic and complementary methods of physical examination	6E-1, 6E-2, 6E-3		0:45	Gotić J.	P_klinike
02/03/2026	8:15	9:45	p7 Temperature, heart rate, respiratory rate and ruminal contractions	6E-1, 6E-2, 6E-3		1:30	Torti M.	P_fiziologija
03/03/2026	8:15	9:45	p8 Mucous membranes and lymph nodes	6E-1, 6E-2, 6E-3		1:30	Grden D.	P_fiziologija
04/03/2026	14:00	15:30	p9 Clinical examination of the heart; pericardiocentesis	6E-1, 6E-2, 6E-3		1:30	Torti M.	P_kemija
05/03/2026	11:45	12:30	p10 Examination of the heart: large animals	6E-1, 6E-2, 6E-3		0:45	Torti M.	P_kemija
05/03/2026	12:30	13:15	p11 ECG	6E-1, 6E-2, 6E-3		0:45	Matijatko V.	P_kemija
05/03/2026	13:15	14:00	p12 Examination of blood vessels and blood pressure	6E-1, 6E-2, 6E-3		0:45	Torti M.	P_kemija
06/03/2026	14:00	15:30	p19 Symptoms of GI disease	6E-1, 6E-2, 6E-3		1:30	Šmit I.	P_klinike
09/03/2026	9:00	10:30	p14 Examination of GI tract 1	6E-1, 6E-2, 6E-3		1:30	Crnogaj M.	P_fizika

Activities - Clinical propedeutics (2/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
10/03/2026	9:30	11:00	p15 Examination of GI tract 2	6E-1, 6E-2, 6E-3		1:30	Gotić J.	P_fizika
11/03/2026	9:45	11:15	p18 Medication administration	6E-1, 6E-2, 6E-3		1:30	Brkljačić M.	P_klinike
12/03/2026	11:45	12:30	p16 Examination: rumen, reticulum, omasus	6E-1, 6E-2, 6E-3		0:45	Gračner D.	P_klinike
12/03/2026	12:30	13:15	p17 Examination- liver; Tests for anterior abdominal pain	6E-1, 6E-2, 6E-3		0:45	Gračner D.	P_klinike
12/03/2026	13:30	15:00	p13 Examination respiratory system; thoracocentesis.	6E-1, 6E-2, 6E-3		1:30	Kiš I.	P_klinike
13/03/2026	11:45	12:30	p30 Dyspnea, effusions, changes in blood pressure	6E-1, 6E-2, 6E-3		0:45	Matijatko V.	P_klinike
13/03/2026	12:30	13:15	p24 Neurologic examination 1	6E-1, 6E-2, 6E-3		0:45	Kiš I.	P_klinike
13/03/2026	13:15	14:00	p25 Neurologic examination 2	6E-1, 6E-2, 6E-3		0:45	Kiš I.	P_klinike
16/03/2026	11:45	12:30	p26 Neurologic examination 3	6E-1, 6E-2, 6E-3		0:45	Kiš I.	P_klinike
17/03/2026	13:15	14:00	p27 Neurologic examination 4	6E-1, 6E-2, 6E-3		0:45	Kiš I.	P_klinike
17/03/2026	14:00	14:45	p20 Urinary system: clinical signs 1	6E-1, 6E-2, 6E-3		0:45	Crnogaj M.	P_klinike
18/03/2026	8:00	8:45	p21 Urinary system: clinical signs 2	6E-1, 6E-2, 6E-3		0:45	Šmit I.	P_klinike
18/03/2026	8:45	9:30	p22 Examination of urinary system	6E-1, 6E-2, 6E-3		0:45	Grden D.	P_klinike
20/03/2026	13:00	13:45	p23 Catheterisation and urinalysis	6E-1, 6E-2, 6E-3		0:45	Šmit I.	P_klinike
20/03/2026	13:45	14:30	p28 Blood collection and complete blood cell count	6E-1, 6E-2, 6E-3		0:45	Šmit I.	P_klinike
20/03/2026	14:45	15:30	p29 Chemistry profiles	6E-1, 6E-2, 6E-3		0:45	Crnogaj M.	P_klinike

Activities - Clinical propedeutics (3/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
23/03/2026	13:15	14:00	p31 Creating a diagnostic plan	6E-1, 6E-2, 6E-3		0:45	Brkljačić M.	P_klinike
23/03/2026	14:15	15:45	p32 Dermatologic propedeutics 1	6E-1, 6E-2, 6E-3		1:30	Lemo N.	P_klinike
23/03/2026	15:45	16:30	p33 Dermatologic propedeutics 2	6E-1, 6E-2, 6E-3		0:45	Lemo N.	P_klinike
25/03/2026	9:45	11:15	p34 Small mammal clinical examination	6E-1, 6E-2, 6E-3		1:30	Brkljačić M.	P_klinike
27/03/2026	8:00	9:30	v1 Handling, restraint;T.,HR.,RR.,MM.,	6E-2		1:30	Nastavnici na predmetu	V_interna
27/03/2026	12:00	13:30	v1 Handling, restraint;T.,HR.,RR.,MM.,	6E-3		1:30	Nastavnici na predmetu	V_interna
27/03/2026	14:00	15:30	v1 Handling, restraint;T.,HR.,RR.,MM.,	6E-1		1:30	Nastavnici na predmetu	V_interna
30/03/2026	14:45	16:15	v2 Lymph n. BCS	6E-3		1:30	Nastavnici na predmetu	V_interna
31/03/2026	10:00	11:30	v2 Lymph n. BCS	6E-1		1:30	Nastavnici na predmetu	V_interna
31/03/2026	13:30	15:00	v2 Lymph n. BCS	6E-2		1:30	Nastavnici na predmetu	V_interna
01/04/2026	11:30	13:00	v9 Medication administration and dosage	6E-1		1:30	Nastavnici na predmetu	V_interna 2
01/04/2026	13:00	14:30	v9 Medication administration and dosage	6E-2		1:30	Nastavnici na predmetu	V_interna 2
01/04/2026	14:30	16:00	v9 Medication administration and dosage	6E-3		1:30	Nastavnici na predmetu	V_interna 2

Activities - Clinical propedeutics (4/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
07/04/2026	10:30	12:00	v7 Examination of urinary tract	6E-1		1:30	Nastavnici na predmetu	V_interna 2
07/04/2026	12:15	13:45	v5 Examination of the respiratory system; Thoracocentesis	6E-3		1:30	Nastavnici na predmetu	V_interna
08/04/2026	8:15	9:45	v5 Examination of the respiratory system; Thoracocentesis	6E-1		1:30	Nastavnici na predmetu	V_interna
08/04/2026	14:00	15:30	v5 Examination of the respiratory system; Thoracocentesis	6E-2		1:30	Nastavnici na predmetu	V_interna
09/04/2026	9:45	11:15	v6 Examination of digestive system	6E-1		1:30	Nastavnici na predmetu	V_interna 2
09/04/2026	13:15	14:45	v6 Examination of digestive system	6E-3		1:30	Nastavnici na predmetu	V_interna 2
09/04/2026	15:00	16:30	v6 Examination of digestive system	6E-2		1:30	Nastavnici na predmetu	V_interna 2
10/04/2026	12:00	13:30	v4 Heart exam., periph. circul., blood press.	6E-3		1:30	Nastavnici na predmetu	V_interna
10/04/2026	13:45	15:15	v7 Examination of urinary tract	6E-2		1:30	Nastavnici na predmetu	V_interna 2
13/04/2026	12:30	14:00	v4 Heart exam., periph. circul., blood press.	6E-2		1:30	Nastavnici na predmetu	V_interna
13/04/2026	14:15	15:45	v7 Examination of urinary tract	6E-3		1:30	Nastavnici na predmetu	V_interna 2

Activities - Clinical propedeutics (5/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
14/04/2026	14:00	15:30	v4 Heart exam., periph. circul., blood press.	6E-1		1:30	Nastavnici na predmetu	V_interna
15/04/2026	9:45	11:15	v8 Introduction to laboratory diagnostics	6E-1		1:30	Nastavnici na predmetu	V_interna 2
15/04/2026	11:30	13:00	v8 Introduction to laboratory diagnostics	6E-2		1:30	Nastavnici na predmetu	V_interna 2
15/04/2026	13:15	14:45	v8 Introduction to laboratory diagnostics	6E-3		1:30	Nastavnici na predmetu	V_interna 2
16/04/2026	8:15	9:45	v3 ECG	6E-1		1:30	Nastavnici na predmetu	V_interna
16/04/2026	10:00	11:30	v3 ECG	6E-2		1:30	Nastavnici na predmetu	V_interna
16/04/2026	11:45	13:15	v3 ECG	6E-3		1:30	Nastavnici na predmetu	V_interna
17/04/2026	9:45	11:15	v10 Neurologic propedeutics part 1	6E-1		1:30	Nastavnici na predmetu	V_interna 2
17/04/2026	11:30	13:00	v10 Neurologic propedeutics part 1	6E-2		1:30	Nastavnici na predmetu	V_interna 2
17/04/2026	13:15	14:45	v10 Neurologic propedeutics part 1	6E-3		1:30	Nastavnici na predmetu	V_interna 2
20/04/2026	8:30	10:00	v12 Dermatologic propedeutics	6E-1		1:30	Nastavnici na predmetu	V_interna 2
20/04/2026	10:15	11:45	v12 Dermatologic propedeutics	6E-3		1:30	Nastavnici na predmetu	V_interna 2

Activities - Clinical propedeutics (6/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
20/04/2026	13:45	15:15	v12 Dermatologic propedeutics	6E-2		1:30	Nastavnici na predmetu	V_interna 2
21/04/2026	12:15	13:45	v13 Interpretation Lab Results	6E-1		1:30	Nastavnici na predmetu	V_interna 2
21/04/2026	14:00	15:30	v13 Interpretation Lab Results	6E-2		1:30	Nastavnici na predmetu	V_interna 2
22/04/2026	8:15	9:45	v13 Interpretation Lab Results	6E-3		1:30	Nastavnici na predmetu	V_interna 2
24/04/2026	8:15	9:45	v14 Colloquium	6E-1		1:30	Nastavnici na predmetu	V_interna 2
24/04/2026	13:00	14:30	v14 Colloquium	6E-2		1:30	Nastavnici na predmetu	V_interna 2
24/04/2026	14:30	16:00	v14 Colloquium	6E-3		1:30	Nastavnici na predmetu	V_interna 2
27/04/2026	10:00	11:30	v15 Examination of small mammals	6E-1		1:30	Nastavnici na predmetu	V_interna 2
27/04/2026	11:45	13:15	v15 Examination of small mammals	6E-2		1:30	Nastavnici na predmetu	V_interna 2
27/04/2026	13:30	15:00	v15 Examination of small mammals	6E-3		1:30	Nastavnici na predmetu	V_interna 2
28/04/2026	11:00	12:30	v16 Creating a diagno.plan, problem list	6E-1		1:30	Nastavnici na predmetu	V_interna 2
28/04/2026	12:45	14:15	v16 Creating a diagno.plan, problem list	6E-2		1:30	Nastavnici na predmetu	V_interna 2

Activities - Clinical propedeutics (7/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
28/04/2026	14:30	16:00	v16 Creating a diagno.plan, problem list	6E-3		1:30	Nastavnici na predmetu	V_interna 2
29/04/2026	11:00	12:30	v11 Neurologic propedeutics part 2	6E-2		1:30	Nastavnici na predmetu	V_interna 2
29/04/2026	12:45	14:15	v11 Neurologic propedeutics part 2	6E-3		1:30	Nastavnici na predmetu	V_interna 2
29/04/2026	14:30	16:00	v11 Neurologic propedeutics part 2	6E-1		1:30	Nastavnici na predmetu	V_interna 2
06/05/2026	11:30	15:15	v17 Clinical propedeutics of farm animals and horses 1	6E-3		3:45	Nastavnici na predmetu	V_štala
07/05/2026	10:00	13:45	v17 Clinical propedeutics of farm animals and horses 1	6E-1		3:45	Nastavnici na predmetu	V_štala
11/05/2026	10:00	13:45	v17 Clinical propedeutics of farm animals and horses 1	6E-2		3:45	Nastavnici na predmetu	V_štala
12/05/2026	11:30	15:15	v18 Clinical propedeutics of farm animals and horses 2	6E-3		3:45	Nastavnici na predmetu	V_štala
13/05/2026	10:00	13:45	v18 Clinical propedeutics of farm animals and horses 2	6E-2		3:45	Nastavnici na predmetu	V_štala
14/05/2026	10:00	13:45	v18 Clinical propedeutics of farm animals and horses 2	6E-1		3:45	Nastavnici na predmetu	V_štala
18/05/2026	10:15	14:00	v19 Clinical propedeutics of farm animals and horses 3	6E-3		3:45	Nastavnici na predmetu	V_štala
19/05/2026	12:00	15:45	v19 Clinical propedeutics of farm animals and horses 3	6E-2		3:45	Nastavnici na predmetu	V_štala

Activities - Clinical propedeutics (8/8)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
20/05/2026	10:00	13:45	v19 Clinical propedeutics of farm animals and horses 3	6E-1		3:45	Nastavnici na predmetu	V_štala
21/05/2026	12:00	15:45	v20 Clinical propedeutics of farm animals and horses 4	6E-1		3:45	Nastavnici na predmetu	V_štala
25/05/2026	11:30	15:15	v20 Clinical propedeutics of farm animals and horses 4	6E-3		3:45	Nastavnici na predmetu	V_štala
26/05/2026	11:45	15:30	v20 Clinical propedeutics of farm animals and horses 4	6E-2		3:45	Nastavnici na predmetu	V_štala
27/05/2026	11:45	16:15	v21 Clinical propedeutics of farm animals and horses 5	6E-1		4:30	Nastavnici na predmetu	V_štala
29/05/2026	11:45	16:15	v21 Clinical propedeutics of farm animals and horses 5	6E-3		4:30	Nastavnici na predmetu	V_štala
01/06/2026	11:45	16:15	v21 Clinical propedeutics of farm animals and horses 5	6E-2		4:30	Nastavnici na predmetu	V_štala
02/06/2026	8:15	9:45	v22 Repetition Clinical examination, clinical report	6E-1		1:30	Nastavnici na predmetu	V_interna 2
02/06/2026	13:30	15:00	v22 Repetition Clinical examination, clinical report	6E-3		1:30	Nastavnici na predmetu	V_interna 2
03/06/2026	8:15	9:45	v22 Repetition Clinical examination, clinical report	6E-2		1:30	Nastavnici na predmetu	V_interna 2
Total: 100						168:45		

STUDENT OBLIGATIONS

Lecture attendance	Minimal number of points: 3 (23 hours, 50%); maximal number of points: 6 (45 hours). During the semester for the course „Clinical propedeutics“ the student must be present at 23 hours of lectures in order to obtain minimal 3 points. Maximal number of points that can be obtained with attendance to lectures is 6 points (45 hours of lectures, 1 hour of lectures is 0,133 points).
Practicals attendance	Minimal number of points: 8 (42 hours, 70%); maximal number of points: 12 (60 hours). During the semester for the course „Clinical propedeutics“ the student must be present at 42 hours of practicals in order to obtain minimal 8 points. Maximal number of points that can be obtained with attendance to practicals is 12 points (60 hours of practicals, one hour of practical is 0,2 points). Each excused absence within allowed maximum (18 hours of practicals, 30%) student has to compensate in agreement with the practicals leader.
Active participation in seminars and practicals	Minimal number of points: 5; maximal number of points: 10. At the beginning of each practicals the teacher performs a short knowledge test. The content of the knowledge test is theoretical knowledge necessary for the practicals that are going to be held (new practicals content) and/or knowledge from already held practicals. During practicals students will learn predetermined number of procedures and/or examinations. Activity during practicals is recorded in personal file of each student. Activity at the practicals is estimated by the teacher that is holding each practicals.
Final exam	The final exam consists of a written and an oral part. A student can obtain a maximum of 20 points on the written part of the exam. The written part of the exam consists of 20 questions. Each correct answer carries 1 point. The student must answer 12 questions correctly to obtain the minimum of 12 points, in order to meet the requirement for participation in the oral part of the exam. A student can obtain a maximum of 20 points on the oral part of the exam. The oral part of the exam consists of 5 questions. The minimum number of points per question is 2.4 points, and the maximum is 4 points. In order to pass the exam, the student must obtain a minimum of 12 points in the oral part of the exam. The minimum number of points that a student must achieve in the final written and oral exam is 24 points, and the maximum that can be achieved is 40 points.

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	The oral part of the final exam also contains a mandatory practical part. The questions on the final exam cover the entire course material.
Examination requirements	Student requirements are defined in the Regulations on the University 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.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	Colloquium consists of 5 theoretical and practical questions that have to be answered by the student orally and/or practically. Minimal number of points: 20, maximal number of points: 32. Each question is maximally 6,4 points. (Grades: 1 = 0 points; 2 = 4,0 points; 3 = 4,8 points; 4 = 5,6 points; 5 = 6,4 points). This year colloquium will be held on 23/4/2024 in scheduled time for practicals. Students are expected to answer each question with more than 51% of content. One insufficient answer from those 5 questions will lead to negative colloquium outcome. Colloquium date: 24/4/2026;
Final exams (dates)	28/4/2026; 16/6/2026; 10/7/2026; 10/9/2026; 21/9/2026
Form of final exam	The final exam consists of a written and an oral part

LITERATURE

Obligatory literature	Lecture handouts via the LMS and/or printed handouts Selected chapters from: RADOSTITS, O. M., I. G. MAYHEW, D. M. HOUSTON (2000): Veterinary clinical examination and diagnosis. WB Saunders, London, Edinburgh, New York, Philadelphia, St Louis, Sydney, Toronto. RIJNBERK, A., F. J. VAN SLUIJS (2009): Medical history and physical examination in
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	companion animals. 2nd ed., Saunders Elsevier, Houten.
Optional literature	<p>ASPINALL, V., R. ASPINALL (2013): Clinical procedures in small animal veterinary practice. Saunders Elsevier, Edinburgh.</p> <p>BEXFIELD, N., K. LEE (2010): BSAVA Guide to procedures in small animal practice. BSAVA, Gloucester.</p> <p>COSTA, L. R. R., M. R. PARADIS (2018): Manual of clinical procedures in the horse. Willey Blackwell, New Delhi.</p> <p>ENGLAR, R. E. (2017): Performing the small animal physical examination. Willey Blackwell, New York.</p> <p>ROCKETT, J., S. BOSTED (2016): Veterinary clinical procedures in large animal practice. 2nd ed., Cengage Learning, Boston.</p> <p>JACKSON, P. G. G., P. D. COCKCROFT (2002): Clinical examination of farm animals. Blackwell science, Oxford, Malden, Iowa, Victoria, Berlin.</p> <p>MILLER, W. JR, C. GRIFFIN, K. CAMPBELL (2013): Muller & Kirk's Small Animal Dermatology. 7th ed., Saunders-Elsevier, St Louis.</p> <p>SPEIRS, V. E., R. H. WRIGLEY (1997): Clinical examination of horses. Saunders, Pennsylvania</p>

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	The objective of the course is to acquire basic knowledge and skills necessary to perform physical examination of the domestic animals, compose the list of clinical problems and form the diagnostic plan. Furthermore, the objective of the course is to become acquainted with basic additional diagnostic methods and interpretation of laboratory and other additional findings. Knowledge and skills acquired through participation in this course prepare the students to be able to work in clinical departments and give them base for further learning and specialization in clinical disciplines.
Learning outcomes	<ol style="list-style-type: none">1. Assess anamnestic data obtained from the animal owner2. Select appropriate methods for calming and preparing animals to ensure a safe clinical examination .3. Determine clinical findings using basic and additional clinical examination methods and formulate them in a clinical record4. Evaluate the obtained clinical findings of various organs or organ systems5. Distinguish physiological from pathological conditions of individual organs or organ systems based on clinical examination.6. Perform diagnostic and therapeutic procedures on domestic ruminants, equines, and small companion carnivores.

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)

[Signature]
Course leader

[Signature]
Head of organizational unit:

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