UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
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Division: Department of Animal Production and Biotechnology
Organizational unit: Unit of Animal Nutrition and Dietetics
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Register No of the organizational unit: 61-07-26-11
Zagreb, 28/01/2026

COURSE SYLLABUS

APPLIED ANIMAL NUTRITION

Academic year 2025/2026

Course leader: Prof. Hrvoje Valpotić

Deputy course leader: Prof. Željko Mikulec

Teachers: Full Prof. Željko Mikulec, Prof. Hrvoje Valpotić,

First day of classes: 25/02/2026
Last day of classes: 19/05/2026

Activities - Applied animal nutrition (1/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
25/02/2026	10:00	11:30	p01 Nutrition in different stages of development	4E-1, 4E-2, 4E-3		1:30	Valpotić H.	P_kemija
26/02/2026	12:00	13:30	p02 Feeding dairy cows	4E-1, 4E-2, 4E-3		1:30	Valpotić H.	P_farmakologija
27/02/2026	11:45	13:15	v01 Dairy cows	4E-3		1:30	Nastavnici na predmetu	P_patologija
02/03/2026	13:30	15:00	v01 Dairy cows	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_patologija
04/03/2026	10:30	12:00	v02 Dairy cows, beef cattle	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_fizika
05/03/2026	11:45	13:15	v02 Dairy cows, beef cattle	4E-3		1:30	Nastavnici na predmetu	P_fizika
11/03/2026	12:00	13:30	p03 Calf nutrition. Feeding beef cattle	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_patologija
12/03/2026	10:00	11:30	v03 Feeding dairy cows	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_fizika
13/03/2026	8:15	9:45	p04 Sheep nutrition	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_kemija
13/03/2026	12:00	13:30	v03 Feeding dairy cows	4E-3		1:30	Nastavnici na predmetu	P_fizika
16/03/2026	8:15	9:45	v04 Sheep and goat	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_amfiteatar
16/03/2026	15:30	16:15	p05 Goat nutrition	4E-1, 4E-2, 4E-3		0:45	Mikulec Ž.	P_kemija
18/03/2026	13:00	14:30	v04 Sheep and goat	4E-3		1:30	Nastavnici na predmetu	P_patologija
19/03/2026	8:15	9:45	p06 Feeding sows and boars	4E-1, 4E-2, 4E-3		1:30	Valpotić H.	P_kemija

Activities - Applied animal nutrition (2/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
20/03/2026	10:00	16:00	t01	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
24/03/2026	8:15	9:45	p07 Feeding piglets. Feeding growing-finishing pigs.	4E-1, 4E-2, 4E-3		1:30	Valpotić H.	P_kemija
25/03/2026	11:30	13:00	v05 Swine I	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_patologija
25/03/2026	13:15	14:45	v05 Swine I	4E-3		1:30	Nastavnici na predmetu	P_patologija
27/03/2026	10:00	16:00	t02	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
30/03/2026	11:30	13:00	p08 Feeding poultry	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_patologija
31/03/2026	11:00	12:30	v06 Swine II	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_patologija
01/04/2026	8:15	9:45	v06 Swine II	4E-3		1:30	Nastavnici na predmetu	P_patologija
08/04/2026	8:15	9:45	v07 Poultry	4E-3		1:30	Nastavnici na predmetu	P_fizika
08/04/2026	12:00	12:45	p09 Feeding poulty	4E-1, 4E-2, 4E-3		0:45	Mikulec Ž.	P_fiziologija
09/04/2026	12:00	13:30	p10 Dog and cat nutrition	4E-1, 4E-2, 4E-3		1:30	Valpotić H.	P_fizika
10/04/2026	13:45	15:15	v07 Poultry	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_kemija
13/04/2026	10:15	11:45	v08 Dog and cat I	4E-3		1:30	Nastavnici na predmetu	P_patologija
14/04/2026	8:15	9:45	v08 Dog and cat I	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_kemija

Activities - Applied animal nutrition (3/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
15/04/2026	9:45	11:15	v09 Dog and cat II	4E-3		1:30	Nastavnici na predmetu	P_patologija
15/04/2026	11:30	13:00	v09 Dog and cat II	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_patologija
15/04/2026	13:30	14:15	p11 Dog and cat nutrition	4E-1, 4E-2, 4E-3		0:45	Valpotić H.	P_patologija
16/04/2026	13:30	14:15	p12 Feeding horses	4E-1, 4E-2, 4E-3		0:45	Valpotić H.	P_patologija
20/04/2026	10:30	12:00	v10 Dog and cat III	4E-3		1:30	Nastavnici na predmetu	P_patologija
21/04/2026	10:00	11:30	v10 Dog and cat III	4E-1, 4E-2		1:30	Nastavnici na predmetu	
21/04/2026	12:00	13:30	p13 Feeding horses	4E-1, 4E-2, 4E-3		1:30	Valpotić H.	P_patologija
22/04/2026	10:00	11:30	p14 Feeding rabbits	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_fizika
24/04/2026	10:00	16:00	t03	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
27/04/2026	8:15	9:45	v11 Horses	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_kemija
27/04/2026	10:00	11:30	v11 Horses	4E-3		1:30	Nastavnici na predmetu	P_patologija
28/04/2026	11:45	13:15	v12 Feeding horses. Rabbit nutrition	4E-3		1:30	Nastavnici na predmetu	P_patologija
29/04/2026	10:15	11:00	p15 Game nutrition	4E-1, 4E-2, 4E-3		0:45	Mikulec Ž.	P_patologija
29/04/2026	11:30	13:00	v12 Feeding horses. Rabbit nutrition	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_patologija
05/05/2026	11:00	12:30	v13 Rodent nutrition	4E-3		1:30	Nastavnici na predmetu	P_fiziologija

Activities - Applied animal nutrition (4/4)

Start Date	Start T	End Ti	Course	Group	Note	Length	Instructor	Room
05/05/2026	14:30	16:00	v13 Rodent nutrition	4E-1, 4E-2		1:30	Nastavnici na predmetu	P_patologija
19/05/2026	10:00	16:00	t04	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
29/05/2026	11:30	12:30	Applied animal nutrition		Colloqium 1	1:00	Valpotić H.	P_kemija
02/06/2026	10:35	11:35	Applied animal nutrition		Colloqium 2	1:00	Valpotić H.	P_kemija
Total: 47						83:45		

STUDENT OBLIGATIONS

Lecture attendance	During the session of the "Applied Animal Nutrition" course, the student must attend 13 lecture lessons to gain a minimum of 3 points. The maximum number of points from this evaluation element is 6 points. Students who don't obtain a minimum of required points for the attendance of lectures are not eligible for the exam.
Practicals attendance	During the session of the "Applied Animal Nutrition" course, the student must attend 34 practical lessons to gain a minimum of 8 points. The maximum number of points from this evaluation element is 12 points. Students who don't obtain a minimum of required points for the attendance of practicals are not eligible for the exam.
Active participation in seminars and practicals	During the session at the time of practicals, the students will be given a short, unannounced quiz. The minimum number of points to pass this evaluation is 5. Students who don't obtain a minimum of the required points for the activity or are not present at the time of the quiz are not eligible for the exam. The maximum number of points that a student can gain on the quiz is 10.
Final exam	The final exam will consist of a written and oral part. The written exam will consist of 20 questions, each of which is worth 1 point. The written exam is in the form of multiple-choice (a to d) with only one correct answer. Students who do not achieve a minimum number of points in the written part of the final exam (fewer than 12) cannot take the oral exam. Students who achieve a sufficient number of points (12 to 20) are eligible for the oral exam. A maximum of 20 points can be obtained in the oral exam, and the minimum number of points that must be obtained is 12. The final grade consists of the sum of the points of the written and oral exams.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine (2023). Given the above, the student must acquire a minimum number of points from all assessment elements to take the final exam. Under Article 45, paragraphs 3 and 4 of the Regulations on Integrated Undergraduate and Graduate Studies (2023): a student can justifiably be absent from up to 50 % of the lectures; 30% of the seminars, and 30 % of the practicals.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	During the session, one mid-term will be organized, consisting of 32 questions or problems. Each correctly solved problem or answered question is worth 1 point. A student must gain at least 20 points from the midterm. The maximum number of points from this evaluation is 32 points. Students will have 2 terms to complete this evaluation element. Students who don't obtain a minimum of required points or are not present at all mid-terms in the admitted time are not eligible for the exam.
Mid-term (dates)	29.5.2026., 02.6.2026.
Final exams (dates)	29.6.2026., 9.7.2026., 9.9.2026., 18.9.2026.
Form of final exam	Written and oral

LITERATURE

Obligatory literature	1. CHEEKE, P. R. (2005): Applied Animal Nutrition. Feeds and Feeding. 3rd ed., Pearson Prentice Hall, USA.
Optional literature	1. POND, W. G., D. C. CHURCH, K. R. POND (1995): Basic Animal Nutrition and Feeding. 4th ed., John Wiley and Sons Inc., USA. 2. MCDONALD, P., R. A. EDWARDS, J. F. D. GREENHALGH, C. A. MORGAN, L. A. SINCLAIR, R. G. WILKINSON (2010): Animal Nutrition. 7th ed., Pearson Prentice Hall, USA.

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	Upon completion of the lectures and after passing the final exam of "Applied Animal Nutrition" the students will be able to recognize the conditions in the field and to take feed samples for chemical analysis. They will also know the right procedure for taking samples for analysis and super analysis, and to correctly interpret the results. The acquired skills will enable them to individually formulate balanced rations and feedstuffs for all species and categories of animals. They will also be able to recognize specific nutrient deficiencies and malnutrition in domestic and wild animals, which could have a negative effect on their health status and productivity. Students will be capable of determining and applying preventive and therapeutic feeding in cases of metabolic disorders of high-producing animals. Besides field work, the students will be capable of working in feed mills and in other biomedical fields that require basic knowledge of veterinary nutrition.
Learning outcomes	Upon successful completion of the course, students will be able to: 1. Categorize the characteristics of feeding different species of domestic and wild animals in certain physiological periods 2. Categorize the daily nutritional needs of animals according to the tables of nutritional requirements, biological experiments and practical experience 3. Categorize deficiencies in the feed of domestic and wild animals 4. Manual and computer formulation of rations for certain species and categories of animals 5. Adjust feeding regimes for different species and categories of animals in practical farm conditions and revise inappropriate feeding

GRADING SCHEME

Points	*Grade*
Up to 59	1 (F)
60-76	2 (D,E)
77-84	3 (C)
85-92	4 (B)
93-100	5 (A)

Course leader:

Head of organizational unit: