

2023-2024

BASIC ANIMAL NUTRITION

UNIVERSITY OF ZAGREB  
FACULTY OF VETERINARY MEDICINE  
Heinzelova 55  
Tel. 01/2390272  
Division: Division for Animal Production and Biotechnology  
Department of Animal Nutrition and Dietetics  
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Register no.: 61-07-23-91  
Zagreb, 07. 09. 2023.



170398	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	07.09.2023	
Klasifikacijska oznaka	Org. jed.	
605-03/23-04/28	251-61-32;	
Uredžbeni broj	Prilozi	Vrijednost
251-61-07/353-23-14	0	-

## COURSE SYLLABUS

Course name: Basic Animal Nutrition

Academic year 2023-24

Course leader: Assoc. Prof. Hrvoje Valpotić

Teachers: Full professor Željko Mikulec, Assoc. Prof. Hrvoje Valpotić, Assist. Prof. Diana Brozić

Teaching assistant: Ana Marija Kovač, DVM

First day of classes: October 17<sup>th</sup>, 2023.

Last day of classes: December 20<sup>th</sup>, 2023.

Activities - Basic animal nutrition (1/4)							
Start Dat	Start Tim	End Time	Subject	Group	Instructor	Room	Length
17/10/2023	10:15	11:45	p01 Development of nutrition, protein	3E-1, 3E-2, 3E-3	Valpotic H.	P_amfiteatar	1:30
17/10/2023	12:15	13:45	v01 Analytical methods	3E-3	Nastavnici na predmetu	P_amfiteatar	1:30
19/10/2023	10:15	11:45	p02 Carbohydrates, fats and energy	3E-1, 3E-2, 3E-3	Valpotic H.	P_amfiteatar	1:30
20/10/2023	10:15	11:45	p03 Minerals, vitamins and water	3E-1, 3E-2, 3E-3	Brozic D.	P_amfiteatar	1:30
20/10/2023	12:15	13:45	v01 Analytical methods	3E-1, 3E-2	Nastavnici na predmetu	P_fiziologija	1:30
24/10/2023	10:15	12:30	v02 Water, carbohydrates, fats, protein and amino acids	3E-1, 3E-2	Nastavnici na predmetu	P_fiziologija	2:15
26/10/2023	12:15	14:30	v02 Water, carbohydrates, fats, protein and amino acids	3E-3	Nastavnici na predmetu	P_fiziologija	2:15
27/10/2023	13:00	14:30	v03 Nutritional value of feeds	3E-3	Nastavnici na predmetu	P_fiziologija	1:30

*H. Nole*

Activities - Basic animal nutrition (2/4)								
Start Dat	Start Tim	End Time	Subject	Group	Instructor	Room	Length	
31/10/2023	12:15	13:45	v03 Nutritional value of feeds	3E-1, 3E-2	Nastavnici na predmetu	P_farmakologija	1:30	
06/11/2023	10:15	11:45	p05 Mycotoxins in feed	3E-1, 3E-2, 3E-3	Valpotic H.	P_fiziologija	1:30	
06/11/2023	12:00	12:45	p04 Harmful substances in animal feed	3E-1, 3E-2, 3E-3	Brozic D.	P_patologija	0:45	
08/11/2023	12:15	13:45	v04 Microscopic and hygienic analysis of feed	3E-3	Nastavnici na predmetu	V_patofiziologija	1:30	
09/11/2023	10:15	11:45	v04 Microscopic and hygienic analysis of feed	3E-1, 3E-2	Nastavnici na predmetu	V_patofiziologija	1:30	
09/11/2023	12:15	13:45	p06 Nutritional value of feeds	3E-1, 3E-2, 3E-3	Mikulec Ž.	P_fiziologija	1:30	
13/11/2023	12:15	13:45	p07 Feed additives	3E-1, 3E-2, 3E-3	Mikulec Ž.	P_fiziologija	1:30	
15/11/2023	12:15	13:45	v05 Nutritional value of feeds	3E-3	Nastavnici na predmetu	P_farmakologija	1:30	
15/11/2023	14:15	15:45	v05 Nutritional value of feeds	3E-1, 3E-2	Nastavnici na predmetu	P_fiziologija	1:30	





Activities - Basic animal nutrition (3/4)							
Start Dat	Start Tim	End Time	Subject	Group	Instructor	Room	Length
16/11/2023	12:15	13:45	v06 Feed additives	3E-1, 3E-2	Nastavnici na predmetu	P_farmakologija	1:30
17/11/2023	12:15	13:45	v06 Feed additives	3E-3	Nastavnici na predmetu	P_farmakologija	1:30
22/11/2023	10:15	12:30	v07 Labooratory analysis	3E-1, 3E-2	Nastavnici na predmetu	L_hranidba	2:15
22/11/2023	14:30	16:00	p08 Feed mixtures and pet food	3E-1, 3E-2, 3E-3	Brozic D.	P_kemija	1:30
23/11/2023	10:15	12:30	v07 Labooratory analysis	3E-3	Nastavnici na predmetu	L_hranidba	2:15
27/11/2023	12:15	13:45	v08 Introduction to ration formulation	3E-3	Nastavnici na predmetu	P_kemija	1:30
27/11/2023	14:00	15:30	v08 Introduction to ration formulation	3E-1, 3E-2	Nastavnici na predmetu	P_kemija	1:30
30/11/2023	10:15	11:45	v09 Manual ration formulation	3E-1, 3E-2	Nastavnici na predmetu	P_kemija	1:30
30/11/2023	13:15	14:45	v09 Manual ration formulation	3E-3	Nastavnici na predmetu	P_kemija	1:30
01/12/2023	14:15	15:45	v10 Computer ration formulation	3E-1, 3E-2	Nastavnici na predmetu	R_stocarstvo velika	1:30

*F. Naš*

Activities - Basic animal nutrition (4/4)							
Start Dat	Start Tim	End Time	Subject	Group	Instructor	Room	Length
05/12/2023	12:15	13:45	v10 Computer ration formulation	3E-3	Nastavnici na predmetu	R_stocarstvo velika	1:30
20/12/2023	8:15	14:15	t01 Production of animal feed	3E-1, 3E-2, 3E-3	Nastavnici na predmetu	a1_autobus 1	6:00
Total: 29							50:15

**STUDENT OBLIGATIONS**

Lecture attendance	During the session of the "Basic animal nutrition" course the student must attend 8 lecture lessons in order to gain 3 minimal points. Maximal number of points from this evaluation element is 6 points. Students that don't obtain a minimum of required points for the attendance of lectures are not eligible for exam.
Practicals attendance	During the session of the "Basic animal nutrition" course the student must attend 20 practical lessons in order to gain 8 minimal points. Maximal number of points from this evaluation element is 12 points. Students that don't obtain a minimum of required points for the attendance of practicals are not eligible for exam.
Active participation in seminars and practicals	During the session at the time of practicals the students will be given a short announced 10 question quiz. The quiz will have 10 questions worth one point each (max. 10 points). Minimum amount of points to pass this evaluation is 5. Students that don't obtain a minimum of required points for activity or are not present at the time of the quiz are not eligible for exam.
Compensation and correction of mid-term	Students that for reasonable grounds did not attend or didn't obtain minimum required points form mid-term are obliged to take it during the following time. After the last regular mid-term students are not entitled for compensation/correction until the next academic year.
Final exam	The final exam will be held in written form. The written exam would consist of 40 multiple choice questions (a, b, c, d, e). Each correct answer would carry 1 point (40 points in total), and an incorrect answer would carry 0 points. The minimum number of points for the assessment would be 24, and the maximum number of points would be 40. The total time students would be allowed to write this exam would be 60 minutes. As part of this evaluation element, it is possible to achieve a maximum of 40 points.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine (2022). Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam. Article 41 : 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)	During the session one mid-term will be organised at the time of the lessons, made out of 32 questions or problems. Each correctly solved problem or answered question is worth 1 point. A student must gain the total of 20 points min from the mid-term. The maximum number of points from this evaluation is 32 points.
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	Student will have three terms to complete this evaluation element. Students that don't obtain a minimum of required points or are not present at all mid-terms in admitted time are not eligible for exam.
Final exams (dates)	12.12. 2022., 9.2.2024., 19.2.2024.
Form of final exam	Written

### LITERATURE

Obligatory literature	1. McDonald, P., R. A. Edwards, J. F. D. Greenhalgh, C. A. Morgan, L. A. Sinclair, R. G. Wilkinson (2010): Animal Nutrition (Seventh edition). Pearson Prentice Hall, USA.
Optional literature	1. Pond, W. G., D. C. Church, K. R. Pond (1995): Basic Animal Nutrition and Feeding (Fourth Edition). John Wiley and Sons Inc., USA. 2. Cheeke, P. R. (2005): Applied Animal Nutrition. Feeds and Feeding. (3rd ed.). Pearson Prentice Hall, USA.

### OBJECTIVES AND LEARNING OUTCOMES

Course objectives	After successfully passing the exam of course "Basic Animal Nutrition" students will gain basic knowledge in the area of animal nutrition necessary for better understanding the course "Applied Animal Nutrition" which starts the following semester. This means that students are familiar with chemical components of feed, nutritive values of different groups of feedstuffs, and are able to apply this knowledge. In addition, students will be trained for autonomous organoleptic testing of feedstuffs propriety, their sampling, taking part in different methods of feed analysis and interpretation of the results.
Learning outcomes	<ul style="list-style-type: none"> <li>- Understand basic concepts about nutrients</li> <li>- Have an insight into analytical methods and basic chemical analysis of feed</li> <li>- Estimate the nutritional value of feeds</li> <li>- Understand the variations between feed mixtures and pet food</li> <li>- Have knowledge about substances that can contaminate feed</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:



Head of Department/Clinic:



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>