

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

Email: prehrana_i_dijetetika@vef.hr

Register no.: 61-07-24-132

Zagreb, 02. 09. 2024.



| | | | |
|---------------------------------|----------------------|------------|--|
| 190487 | REPUBLIKA HRVATSKA | | |
| Veterinarski fakultet u Zagrebu | | | |
| Primljeno: | 03.09.2024 | | |
| Klasifikacijska oznaka | Org. jed. | | |
| 602-04/24-22/38 | 251-61-41;251-61-32; | | |
| Urudžbeni broj | Prilozi | Vrijednost | |
| 251-61-07-24-13 | 0 | - | |

COURSE SYLLABUS

Course name: Basic animal nutrition

Academic year 2024-25

Course leader: Full professor Hrvoje Valpotić

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

Teaching assistant: Ana Marija Kovač, DVM

First day of classes: November 6th, 2024.

Last day of classes: January 24th, 2025.

| Activities - Basic animal nutrition (1/3) | | | | | | | | |
|---|---------|--------|---|------------------|------|--------|------------------------|---------------|
| Start Date | Start T | End Ti | Subject | Group | Note | Length | Instructor | Room |
| 06/11/2024 | 10:30 | 12:00 | p01 Development of nutrition, protein | 3E-1, 3E-2, 3E-3 | | 1:30 | Valpotić H. | P_kemija |
| 07/11/2024 | 11:30 | 13:00 | p02 Carbohydrates, fats and energy | 3E-1, 3E-2, 3E-3 | | 1:30 | Valpotić H. | P_amfiteatar |
| 08/11/2024 | 11:45 | 13:15 | v01 Analytical methods | 3E-3 | | 1:30 | Nastavnici na predmetu | P_amfiteatar |
| 08/11/2024 | 14:30 | 16:00 | v01 Analytical methods | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_fiziologija |
| 12/11/2024 | 11:30 | 13:45 | v02 Water, carbohydrates, fats, protein and amino acids | 3E-1, 3E-2 | | 2:15 | Nastavnici na predmetu | P_fiziologija |
| 19/11/2024 | 9:30 | 11:00 | p03 Minerals, vitamins and water | 3E-1, 3E-2, 3E-3 | | 1:30 | Brozić D. | P_amfiteatar |
| 19/11/2024 | 11:15 | 13:30 | v02 Water, carbohydrates, fats, protein and amino acids | 3E-3 | | 2:15 | Nastavnici na predmetu | P_fiziologija |
| 20/11/2024 | 10:15 | 11:00 | p04 Harmful substances in animal feed | 3E-1, 3E-2, 3E-3 | | 0:45 | Brozić D. | P_kemija |
| 21/11/2024 | 14:00 | 15:30 | v03 Nutritional value of feeds | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_kemija |
| 22/11/2024 | 8:15 | 9:45 | p05 Mycotoxins in feed | 3E-1, 3E-2, 3E-3 | | 1:30 | Valpotić H. | P_kemija |
| 22/11/2024 | 12:15 | 13:45 | v03 Nutritional value of feeds | 3E-3 | | 1:30 | Nastavnici na predmetu | P_kemija |
| 02/12/2024 | 8:15 | 9:45 | v04 Microscopic and hygienic analysis of feed | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_patologija |
| 04/12/2024 | 11:30 | 13:00 | p06 Nutritional value of feeds | 3E-1, 3E-2, 3E-3 | | 1:30 | Mikulec Ž. | P_patologija |

| Activities - Basic animal nutrition (2/3) | | | | | | | | |
|---|---------|--------|---|------------------|------|--------|------------------------|---------------|
| Start Date | Start T | End Ti | Subject | Group | Note | Length | Instructor | Room |
| 05/12/2024 | 12:30 | 14:00 | v04 Microscopic and hygienic analysis of feed | 3E-3 | | 1:30 | Nastavnici na predmetu | P_patologija |
| 10/12/2024 | 8:15 | 9:45 | p07 Feed additives | 3E-1, 3E-2, 3E-3 | | 1:30 | Mikulec Ž. | P_patologija |
| 10/12/2024 | 10:00 | 11:30 | v05 Nutritional value of feeds | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_patologija |
| 10/12/2024 | 13:30 | 15:00 | v05 Nutritional value of feeds | 3E-3 | | 1:30 | Nastavnici na predmetu | P_patologija |
| 12/12/2024 | 8:15 | 9:45 | v06 Feed additives | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_fizika |
| 13/12/2024 | 10:15 | 11:45 | v06 Feed additives | 3E-3 | | 1:30 | Nastavnici na predmetu | P_fizika |
| 17/12/2024 | 10:00 | 16:00 | t01 Production of animal feed | 3E-1, 3E-2, 3E-3 | | 6:00 | Nastavnici na predmetu | a1_autobus 1 |
| 19/12/2024 | 8:15 | 9:45 | p08 Feed mixtures and pet food | 3E-1, 3E-2, 3E-3 | | 1:30 | Brozić D. | P_kemija |
| 20/12/2024 | 8:15 | 10:30 | v07 Labooratory analysis | 3E-1, 3E-2 | | 2:15 | Nastavnici na predmetu | L_hranidba |
| 20/12/2024 | 10:45 | 13:00 | v07 Labooratory analysis | 3E-3 | | 2:15 | Nastavnici na predmetu | L_hranidba |
| 07/01/2025 | 11:30 | 13:00 | v08 Introduction to ration formulation | 3E-3 | | 1:30 | Nastavnici na predmetu | P_kemija |
| 08/01/2025 | 10:15 | 11:45 | v08 Introduction to ration formulation | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_fiziologija |
| 09/01/2025 | 10:45 | 12:15 | v09 Manual ration formulation | 3E-3 | | 1:30 | Nastavnici na predmetu | P_patologija |

| Activities - Basic animal nutrition (3/3) | | | | | | | | |
|---|---------|--------|---------------------------------|------------|------------|--------|------------------------|-------------------|
| Start Date | Start T | End Ti | Subject | Group | Note | Length | Instructor | Room |
| 10/01/2025 | 10:15 | 11:45 | v09 Manual ration formulation | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | P_kemija |
| 13/01/2025 | 10:15 | 11:45 | v10 Computer ration formulation | 3E-1, 3E-2 | | 1:30 | Nastavnici na predmetu | R_patofiziologija |
| 13/01/2025 | 13:00 | 14:30 | v10 Computer ration formulation | 3E-3 | | 1:30 | Nastavnici na predmetu | R_patofiziologija |
| 15/01/2025 | 10:00 | 12:00 | Basic animal nutrition | | Kolokvij | 2:00 | Valpotić H. | P_patologija |
| 24/01/2025 | 14:00 | 16:00 | Basic animal nutrition | | Kolokvij | 2:00 | Valpotić H. | P_kemija |
| | | | Basic animal nutrition | | Final exam | 1:30 | Valpotić H. | P_kemija |
| | | | Basic animal nutrition | | Final exam | 1:30 | Valpotić H. | |
| Total: 33 | | | | | | 57:15 | | |

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. |
|---|--|

| | |
|---------------------|--|
| | Students will have three 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 admitted time are not eligible for the exam. |
| Mid-term (dates) | 15. 01.2025., 24. 01. 2025. |
| Final exams (dates) | 12.12. 2024., 6. 2. 2025., 18. 2. 2025. |

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 the chemical components of feed, and nutritive values of different groups of feedstuffs, and can 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"> - Interconnect basic concepts about nutrients - Review analytical methods and basic chemical analysis of feed - Reassess the nutritional value of feeds - Compare the differences between feed mixtures and pet food - Anticipate the harmful substances that can contaminate feed - Review the results of individual analyses of animal feed - Review the nutritional value and safety of certain feed ingredients - Distinguish the production technology of certain forms of feed - Determine the specific nutritional needs of animals in certain physiological and production periods - Estimate the required nutritional composition of feed suitable for individual physiological and |

production periods

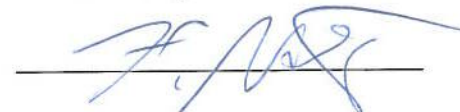
GRADING SCHEME

| <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 |
| TOTAL | 60 | 100 |

**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 |
| TOTAL | 60 | 100 |

**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 |
| TOTAL | 60 | 100 |