

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
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Register no.: 61-07-18-68
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COURSE SYLLABUS

Course name: Basic animal nutrition

Academic year 2018-19

Course leader: Assist. Prof. Hrvoje Valpotić

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

Associate teachers: Diana Brozić, DVM, PhD

First day of classes: October 1st, 2018.

Last day of classes: November 7th, 2018.

Timetable for LECTURES academic year 2018-2019

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
1. 10. 2018.	Development of nutrition and current status in science. Interaction of soil-plant-animal. Basic chemical analysis of feed. Analytical methods.	Assist. Prof. H. Valpotić	Department of Animal Nutrition and Dietetics (10.00-12.00 h)	1. + material from lectures
1. 10. 2018.	Water and dry matter in feed. Carbohydrates in feed. Fats in feed.	Assist. Prof. H. Valpotić	Department of Animal Nutrition and Dietetics (12.00-14.00 h)	1. + material from lectures
2. 10. 2018.	Protein and amino acids in feed. Energy metabolism.	Assist. Prof. H. Valpotić	Department of Animal Nutrition and Dietetics (08.00-10.00 h)	1. + material from lectures
10. 10. 2018.	Nutritional value of feeds.	Full professor Željko Mikulec	Department of Animal Nutrition and Dietetics (09.00-11.00 h)	1. + material from lectures
12. 10. 2018.	Feed mixtures and pet food.	Full professor Željko Mikulec	Department of Animal Nutrition and Dietetics (16.00-18.00 h)	1. + material from lectures
15. 10. 2018.	Harmful substances in animal feed.	Assist. Prof. H. Valpotić	Department of Animal Nutrition and Dietetics (16.00-18.00 h)	1. + material from lectures
22. 10. 2018.	Feed additives.	Full professor Željko Mikulec	Department of Animal Nutrition and Dietetics (10.00-12.00 h)	1. + material from lectures
23. 10. 2018.	Minerals in feed. Vitamins in feed.	Full professor Željko Mikulec	Department of Animal Nutrition and Dietetics (12.00-13.00 h)	1. + material from lectures

Timetable for PRACTICALS academic year 2018-2019

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical	Group	Location / time	Literature
3. 10. 2018.	Analytical methods for feed.	Assist. Prof. H. Valpotić	Practicum	1	Department of Animal Nutrition and Dietetics (08.00-10.00 h)	1. + material from practicals
4. 10. 2018.	Water and dry matter in feed. Carbohydrates in feed. Fats in feed.	Diana Brozić, DVM, PhD	Practicum	1	Department of Animal Nutrition and Dietetics (08.00-10.00 h)	1.+ material from practicals
5. 10. 2018.	Protein and amino acids in feed. Energy metabolism.	Assist. Prof. H. Valpotić	Practicum	1	Department of Animal Nutrition and Dietetics (10.00-12.00 h)	1. + material from practicals
9. 10. 2018.	Nutritional value of feeds.	Full professor Željko Mikulec	Practicum	1	Department of Animal Nutrition and Dietetics (14.00-16.00 h)	1. + material from practicals
12. 10. 2018.	Nutritional value of feeds.	Full professor Željko Mikulec	Practicum	1	Department of Animal Nutrition and Dietetics (12.00-14.00 h)	1. + material from practicals
15. 10. 2018.	Feed mixtures and pet food. Feed additives.	Full professor Željko Mikulec	Practicum	1	Department of Animal Nutrition and Dietetics (14.00-16.00 h)	1. + material from practicals
16. 10. 2018.	Microscopic and hygienic analysis of feed.	Diana Brozić, DVM, PhD	Laboratory	1	Department of Animal Nutrition and Dietetics (10.00-12.00 h)	1. + material from practicals

24. 10. 2018.	Laboratory analysis of animal feed.	Diana Brozić, DVM, PhD	Laboratory	1	Laboratory for safety and quality of animal feed. (13.00-15.00 h)	1. + material from practicals
25. 10. 2018.	Introduction to ration formulation.	Diana Brozić, DVM, PhD	Practicum	1	Department of Animal Nutrition and Dietetics (11.00-13.00 h)	1. + material from practicals
26. 10. 2018.	Manual ration formulation.	Diana Brozić, DVM, PhD	Practicum	1	Department of Animal Nutrition and Dietetics (09.00-11.00 h)	1. + material from practicals
29. 10. 2018.	Computer ration formulation.	Assist. Prof. H. Valpotić	Practicum	1	Department of Animal Nutrition and Dietetics (10.00-12.00 h)	1. + material from practicals
30. 10. 2018.	Computer ration formulation.	Assist. Prof. H. Valpotić	Practicum	1	Department of Animal Nutrition and Dietetics (10.00-12.00 h)	1. + material from practicals
05. 11. 2018.	Preliminary exam I/1 st . Computer ration formulation.	Diana Brozić, DVM, PhD	Practicum	1	Department of Animal Nutrition and Dietetics (17.00-19.00 h)	Literature from the course 1. + material from practicals
06. 11. 2018.	Course overview with compensation. Formulating rations for domestic animals.	Assist. Prof. H. Valpotić	Practicum	1	Department of Animal Nutrition and Dietetics (09.00-11.00 h)	Literature from the course 1. + material from practicals
07. 11. 2018.	Preliminary exam I/2 nd . Computer ration formulation.	Diana Brozić, DVM, PhD	Practicum	1	Department of Animal Nutrition and Dietetics (08.00-10.00 h)	Literature from the course 1. + material from practicals

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 oral form. At the final exam a student is given 4 questions each worth 10 points. The maximum number of points a student can gain at the final exam is 40. The student must gain a minimum of 24 points from this evaluation element.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine. Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam. Article 45: 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. 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)	13/11/2018, 10/12/2018, 11/1/2019, 31/1/2019, 14/2/2019
Form of final exam	Oral

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"> - Understand basic concepts about nutrients - Have an insight into analytical methods and basic chemical analysis of feed - Estimate the nutritional value of feeds

- Understand the variations between feed mixtures and pet food
- Have knowledge about substances that can contaminate feed

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