

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
Heinzelova 55
Tel. 01/2390292
Division: Animal production and biotechnology
Department for hygiene, behaviour and animal welfare
Email: kmatkov@vef.hr
Register no.: 77/2018
File no.:
Zagreb, 30th August 2018.

COURSE SYLLABUS

Course name: Hygiene and Housing of Animals

Academic year 2018-19 III. **(winter) semester**

Course leader: Kristina Matković, DVM, PhD, Associate Professor

Teachers: Gordana Gregurić Gračner, DVM, PhD, Assistant Professor,
Mario Ostović, DVM, PhD, Assistant Professor

First day of classes: 12. 11. 2018

Last day of classes: 09. 01. 2019

Timetable for LECTURES academic year 2018-2019

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
12.11.2018	Introductory lecture, Environment and animal health	Kristina Matković	Lecture Room Department of Microbiology and Infectious Diseases with Clinic 10-12h	see list of literature
14.11.2018	Microclimate	Mario Ostović	Lecture Room Department of Chemistry and Biochemistry 14-16h	see list of literature
23.11.2018	Basic principles in building and equipping stables	Gordana Gregurić Gračner	Lecture Room Department of Chemistry and Biochemistry 14-16h	see list of literature
27.11.2018	Animal transport	Gordana Gregurić Gračner	Lecture Room Department of Chemistry and Biochemistry 15-17h	see list of literature
03.12.2018	Disposal of carcasses and confiscate Biosecurity on farms	Mario Ostović Matković Kristina	Lecture Room Department of Chemistry and Biochemistry 14-16h	see list of literature
06.12.2018	Disinfection in veterinary practice	Mario Ostović	Lecture Room Department of Chemistry and Biochemistry 8-10h	see list of literature
07.12.2018	Control of harmful insects in veterinary and stockbreeding	Matković Kristina	Lecture Room Department of Chemistry and Biochemistry 12-14h	see list of literature
12.12.2018	Control of harmful rodents in veterinary and stockbreeding	Matković Kristina	Lecture Room Department of Chemistry and Biochemistry 12-14h	see list of literature

Timetable for PRACTICALS academic year 2018-2019

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical	Group	Location / time	Literature
13.11.2018	Heat balance in stables	Gordana Gregurić Gračner	methodical		Lecture Room Department of Chemistry and Biochemistry 8-10 h	Handout
15.11.2018	Microclimate I.	Mario Ostović	laboratory		Lecture Room Department of Chemistry and Biochemistry 14-16 h	Handout
20.11.2018	Microclimate II.	Mario Ostović	laboratory		Lecture Room Department of Chemistry and Biochemistry 12-14 h	Handout
29.11.2018	Building and equipping of stable	Gordana Gregurić Gračner	methodical		Lecture Room Department of Chemistry and Biochemistry 8-10 h	Handout
30.11.2018	Animals protection during	Gordana Gregurić	methodical		Lecture Room Department of	Handout

	transportation	Gračner			Chemistry and Biochemistry	
					8-10 h	
04.12.2018	Repetitorium and colloquium	all teachers	methodical		Lecture Room Department of Chemistry and Biochemistry	Handout
					14-16 h	
05.12.2018	Sanitation measures and environment	Kristina Matković	methodical		Lecture Room Department of Chemistry and Biochemistry	Handout
					8-10 h	
11.12.2018	Practical disinfection	Mario Ostović	laboratory		Lecture Room Department of Chemistry and Biochemistry	Handout
					12-14 h	
14.12.2018	Sanitation measures and environment	Gordana Gregurić Gračner	methodical		Lecture Room Department of Chemistry and Biochemistry	Handout
					10-12 h	
07.01.2018	Biology and ecology of harmful insects in veterinary and stockbreeding	Kristina Matković	methodical		Lecture Room Department of Chemistry and Biochemistry	Handout

					10-12 h	
08.01.2018	Biology and ecology of harmful rodents in veterinary and stockbreeding	Kristina Matković	methodical		Lecture Room Department of Chemistry and Biochemistry	Handout
					12-14 h	
09.01.2018	Repetitorium and colloquium	all teachers	methodical		Lecture Room Department of Chemistry and Biochemistry	Handout
					10-12 h	

STUDENT OBLIGATIONS

Lecture attendance	During the two semesters, the student must be present at 15 hours of lectures to get minimal 3 credits. An achievable maximum point in this element is 6.
Seminars attendance	During the semester, the student must be present at 15 hours of seminars to get minimal 4 credits. An achievable maximum point in this element is 6.
Practicals attendance	During the two semesters, the student must be present at 28 hours of practical's to get minimal 4 credits. An achievable maximum point in this element is 6.
Active participation in seminars and practicals	Activity in the practical's and seminars shall be graded as follows: for two correct answers during practicals (each answer is worth 2 points) (III semester, 4 points); To create a seminar paper achieves additional 2 points. If the seminar held at the Power Point, the student achieves an additional 2 points. (IV semester – 4 points,); Creating reports from field practical's (IV semester) 8 points, total 12 points
Final exam	Minimum conditions for the passage of the first, second, third, fourth and fifth evaluation elements will be aggregated and must amount to 36 credits. To access the final exam, students need to realize those 36 points. The final exam will be conducted in the form of a written exam, which consists of 8 questions

	(2 points to "sufficient" response on the question, 3 points for a "good" response on the question, 4 points for "very good" response on the question, 5 points for "excellent" response on the question). With the total of 40 collected points the student will achieve a maximum of 40 points. For a minimum 24 points, a student must collect 24 points out of this 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)	First colloquium 04.12.2018 Second colloquium 09. 01.2018
Final exams (dates)	
Form of final exam	Written exam

LITERATURE

Obligatory literature	<ol style="list-style-type: none"> 1. Aland, A, T. Banhazi (2013): Livestock housing. Wageningen Academic Publishers. NL. 2. Buckle, A. P., R. H. Smith (1994): Rodent Pests and Their Control. CABI Publishing, London, UK 3. Deeming, D.C. (1999): The Ostrich: Biology, Production and Health. CABI Publishing, London, UK. 4. Dewi, I. A., R. F. E. Axford, I. F. M. Marai, H. Omed (1994): Pollution in Livestock Production Systems. CABI Publishing, London, UK. 5. Grandin, T. (2000): Livestock Handling and Transport (2nd Edition). CABI Publishing, London, UK. 6. Harrison, R.M. (1995): Pollution: Causes Effects and Control (2nd Edition). The Royal Society of Chemistry, Cambridge, UK
-----------------------	--

	<p>7. Mc Namara, J. P., D. E. Beever (2000): Modeling Nutrient Utilization in Farm Animals. CABI Publishing, London, UK.</p> <p>8. Methling, V., J. Unshelm (Hrsg.) (2002): Umwelt - und tier - gerechte Haltung von Nutz, Heim und Begleitteren. Parey Buchverlag, Berlin, Deutschland.</p> <p>9. Strauch, D., R. Böhm (Hrsg.) (2002): Reinigung und Desinfektion in der Nutztierhaltung und Veredelungswirtschaft. Enke Verlag, Stuttgart, Deutschland.</p> <p>10. Wathes, C. M., D. R. Charles (1994): Livestock Housing. CABI Publishing, London, UK.</p> <p>11. Webster, J. (ed) (2011): Management and Welfare of Farm Animals. UFAW Animal welfare series. Wiley-Blackwell. UK.</p>
Optional literature	<p>1. Asaj, A. (2003): Higijena na farmi i u okolišu. Medicinska naklada, Zagreb</p> <p>2. Asaj, A. (1999): Deratizacija u praksi. Medicinska naklada, Zagreb.</p> <p>3. Asaj, A. (1999): Dezinfekcija. Medicinska naklada, Zagreb.</p> <p>4. Asaj, A. (1999): Zdravstvena dezinfekcija u nastambama i okolišu, Medicinska naklada, Zagreb.</p> <p>5. Caput, P. (1996): Govedarstvo. Celeber d.o.o., Zagreb.</p> <p>6. Dolenc, Ž. (1994): Svinjogojstvo. Nakladni zavod Globus, Zagreb</p> <p>7. Martinović, J. (2000): Tla u Hrvatskoj. Pokret prijatelja prirode «Lijepa naša», Zagreb.</p> <p>8. Mioč, B., V. Pavić (2002): Kozarstvo. Hrvatska mljekarska udruga, Zagreb.</p> <p>9. Nemanič, J., Ž. Berić (1995): Peradarstvo. Nakladni zavod Globus, Zagreb.</p> <p>10. Omrčen, S. (1995): Kuničarstvo. Nakladni zavod Globus, Zagreb.</p> <p>11. Senčić, Đ., Ž. Pavičić, Ž. Bukvić (1996): Intenzivno svinjogojstvo. NIP Nova Zemlja, Osijek.</p> <p>12. Uremović, M., Z. Uremović (1997): Svinjogojstvo. Agronomski fakultet, Zagreb.</p> <p>13. Uremović, Z. (2004): Govedarstvo. Hrvatska mljekarska udruga, Zagreb.</p> <p>14. Uremović, Z., M. Uremović, V. Pavić, B. Mioč, S. Mužić, Z. Janječić (2002): Stočarstvo. Agronomski fakultet, Zagreb.</p> <p>15. Vučemilo, M. (2008): Higijena i bioekologija u peradarstvu. Veterinarski fakultet Sveučilišta u Zagrebu. Zagreb.</p>

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	The objective of the course is to develop competences qualifying students for preservation of biological balance between the environment and the animal while exhibiting appropriate health state through optimal productivity and reproduction.
Learning outcomes	The course will enable the students acquire skills and knowledge qualifying them to ensure appropriate animal housing to prevent the occurrence of unfavourable conditions of housing environment that may compromise animal health, productivity and reproduction. In addition, students will acquire due knowledge about the methods of animal waste disposal to prevent environmental contamination, and on the role of veterinarian in animal care and transportation to prevent stress situations and health disturbance due to inappropriate transfer from one setting to another one, or because of poor animal hygiene. Sanitation plays a crucial role in preventive veterinary medicine; therefore the course will provide students with due knowledge and skills in the methods, types and effects of disinfection in preserving animal health as well as in the control of pest insects and rodents in the environment to prevent the spread of disease to humans and animals.

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

Kolegij: