

2021-2022

UNIVERSITY OF ZAGREB

FACULTY OF VETERINARY MEDICINE

Heinzlova 55

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Division: Animal Production and Biotechnology

Department for Hygiene, Behaviour and Animal Welfare

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129338	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	31.08.2021	
Klasifikacijska oznaka	Org. jed.	
605-03/21-04/31	251-61-32;	
Uradžbeni broj	Pilozi	Vrijednost
251-61-16-21-03	0	-

COURSE SYLLABUS

Course name: Hygiene and Housing of Animals

Academic year 2021-22 III. (winter) semester

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

Teachers: Kristina Matković, DVM, PhD, Full Professor, Gordana Gregurić Gračner, DVM, PhD, Associate Professor, Mario Ostović, DVM, PhD, Associate Professor

Assistant: Ivana Sabolek, DVM, junior research assistant

First day of classes: 15.11.2021.

Last day of classes: 21.01.2022.

Timetable for LECTURES academic year 2021-2022

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
Monday 15.11.2021.	Introductory lecture, Environment and animal health	Kristina Matković	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	see list of literature
Tuesday 16.11.2021.	Microclimate	Mario Ostović	Lecture room Department of Chemistry and Biochemistry 8-10h	see list of literature
Monday 29.11.2021.	Basic principles in building and equipping stables	Gordana Gregurić Gračner	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 8-10h	see list of literature
Tuesday 7.12.2021.	Animal transport	Gordana Gregurić Gračner	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 10-12h	see list of literature
Friday 10.12.2021.	Disposal of carcasses and confiscate Biosecurity on farms	Mario Ostović Matković Kristina	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	see list of literature
Friday 17.12.2021.	Disinfection in veterinary practice	Mario Ostović	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 14-16h	see list of literature
Tuesday 21.12.2021.	Control of harmful insects in veterinary and stockbreeding	Matković Kristina	Lecture room Department of Chemistry and Biochemistry 15-17h	see list of literature
Tuesday 11.01.2022.	Control of harmful rodents in veterinary and stockbreeding	Matković Kristina	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 10-12h	see list of literature

Timetable for PRACTICALS academic year 2021-2022

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical	Group	Location / time	Literature
Wednesday 17.11.2021.	Heat balance in stables	Gordana Gregurić Gračner	methodical	1,2	Lecture room Department of Chemistry and Biochemistry 14-16h	Handout
Friday 19.11.2021.	Heat balance in stables	Gordana Gregurić Gračner	methodical	3	Lecture room Department of Chemistry and Biochemistry 10-12h	Handout
Monday 22.11.2021.	Microclimate I.	Mario Ostović	laboratory	1,2	Lecture Room Department of Physiology and Radiobiology 8-10h	Handout
Tuesday 23.11.2021.	Microclimate I.	Mario Ostović	laboratory	3	Lecture room Department of Chemistry and Biochemistry 8-10h	Handout
Wednesday 24.11.2021.	Microclimate II.	Mario Ostović	laboratory	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 10-12h	Handout
Friday 26.11.2021.	Microclimate II.	Mario Ostović	laboratory	1,2	Lecture room Department of Chemistry and Biochemistry 8-10h	Handout
Tuesday 30.11.2021.	Building and equipping of stable	Gordana Gregurić Gračner	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	Handout
Tuesday 30.11.2021.	Building and equipping of stable	Gordana Gregurić Gračner	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 14-16h	Handout
Wednesday 8.12.2021.	Animals protection during transportation	Gordana Gregurić Gračner	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	Handout

2021-2022

Thursday 9.12.2021.	Animals protection during transportation	Gordana Gregurić Gračner	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	Handout
Tuesday 14.12.2021.	Repetitorium and colloquium	all teachers	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	Handout
Tuesday 14.12.2021.	Repetitorium and colloquium	all teachers	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 14-16h	Handout
Wednesday 15.12.2021.	Sanitation measures and environment	Kristina Matković	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 10-12h	Handout
Wednesday 15.12.2021.	Sanitation measures and environment	Kristina Matković	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 14-16h	Handout
Wednesday 22.12.2021.	Practical disinfection	Mario Ostović	laboratory	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 14-16h	Handout
Thursday 23.12.2021.	Practical disinfection	Mario Ostović	laboratory	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 14-16h	Handout
Thursday 13.01.2022.	Sanitation measures and environment	Gordana Gregurić Gračner	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 8-10h	Handout
Friday 14.01.2022.	Sanitation measures and environment	Gordana Gregurić Gračner	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 12-14h	Handout
Monday 17.01.2022.	Biology and ecology of harmful insects in veterinary and stockbreeding	Kristina Matković	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 8-10h	Handout

Tuesday 18.01.2022.	Biology and ecology of harmful insects in veterinary and stockbreeding	Kristina Matković	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 8-10h	Handout
Thursday 20.01.2022.	Biology and ecology of harmful rodents in veterinary and stockbreeding	Kristina Matković	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 8-10h	Handout
Thursday 20.01.2022.	Biology and ecology of harmful rodents in veterinary and stockbreeding	Kristina Matković	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 10-12h	Handout
Friday 21.01.2022.	Repetitorium and colloquium	all teachers	methodical	1,2	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 8-10h	Handout
Friday 21.01.2022.	Repetitorium and colloquium	all teachers	methodical	3	Practical Hall Department of Animal Hygiene, Behaviour and Welfare 10-12h	Handout

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 practicals 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 14.12.2021. Second colloquium 20.1.2022.
Final exams (dates)	10/12/2021 28/1/2022 11/2/2022
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 7. Mc Namara, J. P., D. E. Beever (2000): Modeling Nutrient Utilization in Farm Animals. CABI Publishing, London, UK. 8. Methling, V., J. Unshelm (Hrsg.) (2002): Umwelt - und tier - gerechte Haltung von Nutz, Heim und Begleitern. Parey Buchverlag, Berlin, Deutschland. 9. Strauch, D., R. Böhm (Hrsg.) (2002): Reinigung und Desinfektion in der Nutztierhaltung und Veredelungswirtschaft. Enke Verlag, Stuttgart, Deutschland.
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	<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 dezinsekcija 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. Naladni 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	After successfully mastering the course students will be able to: <ol style="list-style-type: none">1. describe the impact of the accommodation and housing conditions of certain species and categories of animals on their health, production and reproductive performance;2. define the role of veterinarians in the transportation and care of animals, in order to avoid stress and disorders in their health due to improper transfer from one environment to another, or poor hygiene of animals;3. choose ways of animal waste substances disposing for the environmental pollution prevention;4. independently verify the microclimatic conditions in certain animal facilities;5. propose appropriate measures of disinfection and control of harmful insects and rodents in order to preserve the animals and humans health status;6. independently conclude about animal welfare on the basis of the production conditions

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.