

UNIVERSITY OF ZAGREB  
FACULTY OF VETERINARY MEDICINE  
Heinzelova 55  
Tel. 01/2390293  
Animal Production and Biotechnology  
Department of Animal Hygiene, Behaviour and Welfare  
Email: ggracner@gmail.com  
Register no.:78/2018  
Zagreb, 31<sup>st</sup> August 2018

### **COURSE SYLLABUS**

Course name: "ENVIRONMENT, ANIMAL BEHAVIOUR AND WELFARE"

Academic year 2018-19

Course leader: Gordana Gregurić Gračner, PhD, Assistant Professor

Teachers: Kristina Matković, DVM, PhD, Associate professor; Mario Ostović, DVM, PhD, Assistant Professor,

First day of classes: 27<sup>th</sup> September 2018

Last day of classes: 14<sup>th</sup> November 2018

### **Timetable for LECTURES academic year 2018-2019**

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
27.9.2018.	Hygiene of surface soil and drinking water	Gordana Gregurić Gračner	Department of Forensic and Judicial Veterinary Medicine 10-12 h	(see list of literature)
11.10.2018.	Hygiene of drinking water and stock water supply	Mario Ostović	Department of Forensic and Judicial Veterinary Medicine 12-14 h	(see list of literature)
22.10.2018.	Ethology of animals	Kristina Matković	Lecture Room, Department of Chemistry and Biochemistry 10-12 h	(see list of literature)
29.10.2018.	Animal welfare	Gordana Gregurić Gračner Kristina Matković	Amphitheatre 14-16 h	(see list of literature)

Timetable for SEMINARS academic year 2018-2018

SEMINARS					
Date	Methodological unit	Teacher	Group	Location / time	Literature
2.10.2018.	Hygiene of surface soil and drinking water	K. Matković	1,2	Department of Forensic and Judicial Veterinary Medicine 14-16 h	Handout
3.10.2018.	Animal behaviour and welfare	M. Ostović	1,2	Department of Forensic and Judicial Veterinary Medicine 14-16 h h	Handout
4.10.2018.	Animal behaviour and welfare	G. G. Gračner	1,2	Department of Forensic and Judicial Veterinary Medicine 14-16 h	Handout
9.10.2018.	Animal behaviour and welfare	G. G. Gračner	1,2	Department of Physics and Biophysics-lecture hall 10-12 h h	Handout

## Timetable for PRACTICALS academic year 2018-2018

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical	Group	Location / time	Literature
5.10.2018.	Soil hygiene	K. Matković, M. Ostović	Laboratory	1,2	Department of Animal Hygiene, Behaviour and Welfare 12-14 h	Handout
10. 10.2018.	Hygiene of drinking water, the 1 <sup>st</sup> part	Ostović G. G. Gračner,	Laboratory	1,2	Department of Animal Hygiene, Behaviour and Welfare 12-14 h	Handout
12. 10.2018.	Hygiene of drinking water, the 2 <sup>nd</sup> part	G. G. Gračner, K. Matković	Laboratory	1,2	Department of Animal Hygiene, Behaviour and Welfare 12-14 h	Handout
15. 10.2018.	Animal behaviour	K. Matković,	Methodical	1,2	Lecture Room, Department of Chemistry and Biochemistry 8-10 h	Handout
16. 10.2018.	Animal behaviour and welfare	K. Matković	Methodical	1,2	Lecture Room, Department of Veterinary Pathology 12-14 h	Handout
17. 10.2018.	Animal behaviour and welfare	K. Matković	Methodical	1,2	Lecture Room, Department of Chemistry and Biochemistry-lecture hall 12-14 h	Handout

19. 10.2018.	Animal behaviour and welfare	M. Ostović	Methodical	1,2	Lecture Room, Department of Chemistry and Biochemistry-lecture hall 8-10 h	Handout
24. 10.2018.	Animal behaviour and welfare	M. Ostović	Methodical	1,2	Department of Chemistry and Biochemistry-lecture hall 8-10 h	Handout
30.10.2018.	Animal behaviour and welfare	G. G. Gračner	Methodical	1,2	Lecture Room, Department of Chemistry and Biochemistry-lecture hall 16-18 h	Handout
7.11.2018.	Animal behaviour	M. Ostović	Methodical	1,2	Department of Forensic and Judicial Veterinary Medicine 10-12 h	Handout
8. 11.2018.	Animal behaviour	G. G. Gračner	Methodical	1,2	Lecture Room, Department of Chemistry and Biochemistry-lecture hall 12-14 h	Handout
14. 11.2018.	Animal behaviour	G. G. Gračner	Methodical	1,2	Lecture Room, Department of Chemistry and Biochemistry-lecture hall 10-12 h	Handout

**STUDENT OBLIGATIONS**

Lecture attendance	During the semester, the student must be present at 4 hours of lectures to get minimal 3 credits. Achievable maximum points in this element is 6.
Seminars attendance	During the semester, the student must be present at 5 hours of seminars to get minimal 4 credits. Achievable maximum points in this element is 6.
Practicals attendance	During the semester, the student must be present at 16 hours of practicals to get minimal 4 credits. Achievable maximum points in this element is 6.
Active participation in seminars and practicals	Activity in the practicals and seminars shall be graded as follows: for three correct answers during practicals (each answer is worth 1 point) the student will accomplish 3 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. If student collect total of 7 points then will achieve a 10 maximal points. To achieve 5 minimal points the student must collect at least 4 points in this element of evaluation.
Final exam	Written exam – 40 questions / 1 points for each correct answer; a student must have 24 correct answers in order to have minimal 24 points. On written exam student can earn maximal 40 points)
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. <b>Article 45:</b> 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)	Optional (twice during semester)
Final exams (dates)	15.11.2018.; 14.12.2018.; 14.1.2018.; 28.1.2018.; 11.2.2018.
Form of final exam	Written exam.

**LITERATURE**

Obligatory literature	<ol style="list-style-type: none"> <li>1. The Ethology of Domestic Animals (2009): An Introductory Text / edited by Per Jensen-2nd ed.</li> <li>2. Appleby, M. C., B. O. Huges (2004): Poultry Behaviour and Welfare. CABI Publishing, London, UK.</li> <li>3. Fraser, A., D. M. Broom (1996): Farm animal behaviour and welfare (3rd Edition). CABI Publishing, London, UK.</li> <li>4. Harrison, R. M. (1995): Pollution: Causes Effects and Control (2nd Edition). The Royal Society of Chemistry, Cambridge, UK.</li> <li>5. Keeling, L., H. Gonyou (2001): Social Behaviour in Farm Animals. CABI Publishing, London, UK.</li> <li>6. McFarland, D. (1999): Animal behaviour: Psychobiology, Ethology and Evolution (3rd Edition). Pearson Education Limited, Essex, UK.</li> <li>7. Methling, V., J. Unshelm (Hrsg.) (2002): Umwelt – und tier – gerechte Haltung von Nutz, Heim und Begleitteren. Parey Buchverlag, Berlin, Deutschland.</li> <li>8. Rollin, B. R. (2003): Farm Animal Welfare: Social, Bioethical, and Research Issue, Iowa State Press, USA.</li> </ol>
Optional literature	

**OBJECTIVES AND LEARNING OUTCOMES**

Course objectives	<p>The course is one of the basic subjects in preventive veterinary medicine, in which students will acquire due knowledge on the concept of animal behaviour and welfare, to ensure such conditions in practice in which the animal will express the behaviour characteristic of its species while feeling well itself. In addition, knowledge about the impact of ground and water on animal health condition, production and reproduction as well as about the influence of animals upon these environmental factors will be acquired in order to preserve proper bio ecologic relationships in the environment. This approach in presentation of particular topics meets the conditions necessary for full understanding and acquisition of knowledge in other courses in preventive veterinary medicine, primarily in the course "Hygiene and Housing of animals", included in further studies in semesters 3<sup>rd</sup> and 4<sup>th</sup>.</p>
Learning outcomes	<p>Understanding the concept of animal behaviour and welfare          Understanding of mutual impact of animals and environment (soil, water) in order to positive influence on animal health condition, production and reproduction as well as to preserve proper bio ecologic relationships in the environment          After successful completion of the course the student will be able to:</p> <ul style="list-style-type: none"> <li>-explain the effect of soil and water on health, production and reproduction of animals, but also explain the animal impact on the environment in order to preserve the biological and ecological relationships in it</li> <li>-interpreting results of soil and water examinations</li> <li>-organize grazing systems for animals on the basis of climate-specificity, depending of their species, number and health</li> <li>-identify physiological and abnormal behaviour in domestic animals</li> <li>-self-judge the benefit of (farm) animals in the context of their behaviour</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:

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Head of Department/Clinic:

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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**

<b>Type of activity</b>	<b>Minimum number of points</b>	<b>Maximum number of points</b>
Lectures attendance	<b>3</b>	<b>6</b>
Seminar attendance	<b>4</b>	<b>6</b>
Practicals attendance	<b>4</b>	<b>6</b>
Active participation in seminars and practicals	<b>5</b>	<b>10</b>
Continuous knowledge checking (mid-terms)	<b>20</b>	<b>32</b>
Final exam	<b>24</b>	<b>40</b>
<b>TOTAL</b>	<b>60</b>	<b>100</b>

**GRADING AND EVALUATION OF STUDENT WORK ON COURSES WITH  
LECTURES and SEMINARS**

<b>Type of activity</b>	<b>Minimum number of points</b>	<b>Maximum number of points</b>
Lecture attendance	<b>3</b>	<b>6</b>
Practicals attendance	<b>8</b>	<b>12</b>
Active participation in practicals	<b>5</b>	<b>10</b>
Continuous knowledge checking (mid-terms)	<b>20</b>	<b>32</b>
Final exam	<b>24</b>	<b>40</b>
<b>TOTAL</b>	<b>60</b>	<b>100</b>

**GRADING AND EVALUATION OF STUDENT WORK ON COURSES WITH  
SEMINARS and EXERCISES**

<b>Type of activity</b>	<b>Minimum number of points</b>	<b>Maximum number of points</b>
Seminar / practicals attendance	<b>11</b>	<b>18</b>
Active participation in seminars and practicals	<b>5</b>	<b>10</b>
Continuous knowledge checking (mid-terms)	<b>20</b>	<b>32</b>
Final exam	<b>24</b>	<b>40</b>
<b>TOTAL</b>	<b>60</b>	<b>100</b>

Kolegij: