



Sveučilište u Zagrebu Veterinarski fakultet

Ur.br. 61-02-205/18

Course coordinator: Professor Ksenija Vlahović, DVM, PhD, e-mail: vlahovic@vef.hr

Basic and Pre-clinical Sciences Division:

Department of Veterinary Biology

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ISO 9001

BUREAU VERITAS
Certification



69641	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	03.09.2018	
Klasifikacijska oznaka	Org. jed.	
602-04/18-23/11	251-61-32;	
Urudžbeni broj	Prilozi	Vrijednost
251-61-33/302-18-13	0	-

Botany in Veterinary Medicine PLAN OF THE COURSE AND COURSE SCHEDULE 1st Academic year 2018/2019

LIST OF LECTURES AND TEACHING STAFF:

Professor Đuro Huber, DVM, PhD
 Professor Ksenija Vlahović, DVM, PhD
 Professor Maja Popović, DVM, PhD
 Professor Josip Kusak, DVM, PhD
 Associate Professor Tomislav Gomerčić, DVM, PhD
 Assistant Professor Daniel Špoljarić, DVM, PhD
Fodder plants: Professor Nora Mas, DVM, PhD
Poisonous plants: Professor Emil Srebočan; DVM, PhD
Important honey plants in Croatia: Associate Professor Daniel Špoljarić; DVM, PhD
Medicinal plants: Professor Damir Žubčić; DVM, PhD

From 25.09.2018. – 13.10.2018.

1 st week

DAY/DATE	TIME/LECTURE TOPIC	LECTURES	PRACTICAL	LIST OF EXAMINERS	TIME AND PLACE
Tuesday 25/9/2018.	12-14h LECTURE Basic principles in life organisation of plants	Associate Professor Daniel Špoljarić, DVM , PhD			12-14h LECTURE , Lecture Room, Department of Physics and Biophysics
Wednesday 26/9/2018.			PRACTICAL 1 Basic organisational cell types Cell structure and basic organisational cell types Comparison of prokaryotic and eukaryotic cells	Professor Maja Popović, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	8-10h PRACTICALS , groups 1,2 Practical hall of Department of Physics and Biophysics
Thursday 27/9/2018			FIELD COURSES Park Maksimir	Professor Josip Kusak, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	15-17h FIELD COURSES , Maksimir, groups 1,2
Friday 28/9/2018.	10-12h LECTURE Systematics, evolution and phylogenetic relations among plants	Associate Professor Daniel Špoljarić, DVM, PhD	PRACTICAL 2 COLLOQUIUM I Plant cell; Biogenetics and metabolism of plant cell;	Professor Maja Popović, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	10-12h LECTURE , Lecture Room, Department of Physics and Biophysics 12-14h PRACTICALS , groups 1,2 Practical hall of Department of Physics and Biophysics

2nd week

DAY/DATE	TIME/LECTURE TOPIC	LECTURES	PRACTICAL	LIST OF EXAMINERS	TIME AND PLACE
Monday 1/10/2018.	12-14h LECTURE Review of the kingdom of the plants with acknowledging of most important plant families for veterinary medicine	Professor Đuro Huber, DVM, PhD	PRACTICAL 3 COLLOQUIUM II Mitosis DNA molecule isolation from plants	Professor Maja Popović, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	12-14h LECTURE Lecture Room, Department of Veterinary Pathology 14-16h PRACTICALS, groups 1,2 practical hall of Department of Physics and Biophysics
Wednesday 3/10/2018.	8-10h LECTURE Fodder plants	Professor Nora Mas, DVM, PhD			8-10h LECTURE, Lecture Room, Department of Physics and Biophysics
Thursday 4.10.2018.			PRACTICAL 4 COLLOQUIUM III Photosynthesis	Professor Maja Popović, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	16-18h PRACTICALS, groups 1,2 practical hall of Department of Physics and Biophysics

3rd week

DAY/DATE	TIME/LECTURE TOPIC	LECTURES	PRACTICAL	LIST OF EXAMINERS	TIME AND PLACE
Thursday 11/10/2018.	14-16h LECTURE Poisonous plants Medicinal plants	Professor Damir Žubčić; DVM, PhD Professor Emil Srebočan; DVM, PhD			14-16h LECTURE Lecture Room, Department of Veterinary Pathology
Friday 12/10/2018			PRACTICAL 5 COLLOQUIUM IV Important honey plants in Croatia	Professor Maja Popović, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	14-16 h practicals, groups 1,2 Practical Hall of Department of Physics and Biophysics
Saturday 13.10.2018.	FIELD COURSES			Professor Josip Kusak, DVM, PhD Associate Professor Daniel Špoljarić, DVM, PhD	8-17 h groups 1,2

STUDENT OBLIGATIONS

Lecture attendance	During the session for the „Botany in veterinary medicine” course the student must attend 5 lecture lessons in order to gain 3 minimal points. The maximum gained number of points from this evaluation element is 6 points.
Practicals attendance	During the session student must attend 7 exercise lessons in order to gain 8 minimal points during the semester. The maximum gained number of points from this evaluation element is 12 points.
Active participation in seminars and practicals	During the session at the time of exercises student must do provided tasks from 5 programming exercises and for a completed task she/he gets a signature from the lecturer. Each well done and signed programming exercise is worth 1.4 points. For programming exercises in practicum a student can gain total of 7 points for 5 programme exercises. After a field work lesson (there are 2 field work lessons planned) a student gains 1.5 points if she/he wrote and /or collect predetermined materials. For two positive oral answers during the exercises student gains additional 1.5 points. During the session student must gain total of 5 points in order to have the minimal number of 5 points. Maximal number of points gained from this evaluation element is 10.
Final exam	<p>The final exam starts with a student's short analysis of results gained from the first four types of activities of attending lecture. Questions in the final exam will be put in a way that a student can answer in writing. The maximum number of points that can be gained from the final exam is 60 points, where 1 point = 1 correct answer (60 questions = 60 points). Student must show at least a sufficient knowledge at the final exam, with no regard to gained number of points from the first four evaluation elements, which could be higher than 36. The minimal number of points a student must gain at the final exam is 36 in order to gain minimal number of 24 points. In case a student does not satisfy at the final part of the exam, the lecturer determines time for reexamination.</p> <p>Regardless of a fact that a student gained the number of points from the first four evaluation elements on the basis of makeup preliminary exam or not, the same rules are valid for forming the final mark. The final mark is formed on the basis of total sum from all five evaluation elements.</p>
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 4 preliminary exams will be organized at the time of exercises each of them consisting 5 tasks or questions. Each correctly done task or well answered question is worth 1 point. In context of this evaluation element it is possible to gain the maximum of 20 points. Student must gain total of 13 points from the preliminary exams in order to gain minimum of 20 points. The total gained number of points from this evaluation element is 32 points. Student who does not gain minimum of 13 points during the session has right to take a makeup preliminary exam which will comprise material from all programming exercises and will be organized upon completion of the teaching in the session. Total number of points at the preliminary exam is 20. Student who does the makeup exam with better-than 50% results has right to take the final exam.
Final exams (dates)	19/11/2018.; 4/12/2018.; 18/1/2019.; 1/2/2019.; 15/2/2019.
Form of final exam	Written exam

LITERATURE

Obligatory literature	<ol style="list-style-type: none"> 1. Moore, R., W. D. Clark, K. R. Stern, D. Vodopich (1995): Botany. Wm. C. Brouwn Publischers. 2. Wynn, S.G., Fougere (2007): Veterinary herbal medicine. Mosby Elsevier. 3. WEB Handbook: Overview of the plant kingdom with an introduction into plant groups important in veterinary medicine, Professor Ksenija Vlahović, DVM, MSc, PhD,
Optional literature	

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	<p>Students will be able to distinguish basic systematic categories of plants important for veterinary medicine. They will be able to recognize mutual dependence of plants and animals within the whole ecosystem. They will get acquainted with morphologic basis of fodder plants from plough-fields and grasslands.</p> <p>They will be aware of medicine plants groups as well of plants poisonous for animals. They could get required information on plants important in veterinary medicine using botanic literature and data basis</p>
Learning outcomes	<p>After successful completion of course the student will be able to:</p> <ol style="list-style-type: none"> 1. Compare the structure of prokaryotic and eukaryotic cells and enumerate groups of prokaryotes and explain their significance for animal health as well as the role and application of bacteria in the biosphere and life of humans and animals 2. Distinguish basic systematic categories of plants important for veterinary medicine 3. Differentiate morphology group of plants important in animal nutrition and identify groups of medicinal and honey plants and groups of plants poisonous to animals 4. Draw and explain the processes associated with cell division in plants and animals, and operate a light microscope and draw observed cells and intracellular structures 5. Summarize and write their knowledge of the structure of plant cells and function of its organelles with special reference to material, accommodation and the role of DNA molecules 6. Demonstrate their knowledge in the process of separating molecules of DNA from plant cells 7. Explain the processes from which inorganic becomes organic matter and process where light energy is converted to chemical (photosynthesis reaction, photolysis of water and the respiratory chain) 8. How to use research database systems for search of content relevant to botany in veterinary medicine using literature and databases

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 coordinator: Professor Ksenija Vlahović, DVM, PhD,



Head of Department of Veterinary Biology: Assoc. prof. Tomislav Gomerčić DVM, PhD


