

UNIVERSITY OF ZAGREB
 FACULTY OF VETERINARY MEDICINE
 Ul. Vjekoslava Heinzela 55
 Tel. 01/ 2390 224
 Division: Animal Production and Biotechnology
 Department / Clinic: Department of Animal Breeding and Livestock Production
 E-mail: susic@vef.hr
 Register no.: 61-09-2019-12
 File no.:
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Veterinarski fakultet u Zagrebu		
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Uredžbeni broj	Prilozi	Vrijednost
251-61-09-19-02	0	-

COURSE SYLLABUS

Course name: **Animal Breeding and Production** (4th semester)

Academic year 2018- 2019

Course leader: Velimir Sušić, PhD, Full Professor (permanent)

Associate teachers: Anamaria Ekert Kabalin, PhD, Full Professor
 Sven Menčik, PhD, Assistant Professor
 Maja Maurić, PhD, Assistant Professor
 Ivan Vlahek, VMD

First day of classes: 26.02.2019

Last day of classes: 10.05.2019

Timetable for LECTURES academic year 2018-2019 (4th semester)

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
26.02.2019.	Introduction to the various uses of animals - production, work, experiments, pets, sports, recreation. Importance and basic principles of animal production	Velimir Sušić, PhD, Full Professor	Department of Animal Breeding and Livestock Production / 10.00 -12.00	According to the list of required and optional literature
	Production systems in cattle farming	Maja Maurić, PhD, Assistant Professor		
27.02.2019.	Production systems in cattle farming	Maja Maurić, PhD, Assistant Professor	Department of Animal Breeding and Livestock Production / 14.00 -16.00	According to the list of required and optional literature

28.02.2019.	Production systems in sheep and goat farming	Velimir Sušić, PhD, Full Professor	Department of Animal Breeding and Livestock Production / 12.00-14.00	According to the list of required and optional literature
01.03.2019.	Production systems in sheep and goat farming Production systems in pig farming	Velimir Sušić, PhD, Full Professor Anamaria Ekert Kabalin, PhD, Full Professor	Department of Animal Breeding and Livestock Production / 08.00 -10.00	According to the list of required and optional literature
04.03.2019.	Production systems in pig farming	Anamaria Ekert Kabalin, PhD, Full Professor	Department of Animal Breeding and Livestock Production / 10.00 -12.00	According to the list of required and optional literature
05.03.2019.	Production systems in poultry farming	Sven Menčik, PhD, Assistant Professor	Department of Animal Breeding and Livestock Production / 14.00 -16.00	According to the list of required and optional literature
06.03.2019.	Preventive measures and procedures of health protection as parts of technology in animal production	Sven Menčik, PhD, Assistant Professor	Department of Animal Breeding and Livestock Production / 12.00 -14.00	According to the list of required and optional literature

12.03.2019.	Herd health and production management (1)	Velimir Sušić, PhD, Full Professor	Department of Animal Breeding and Livestock Production / 10.00 -12.00	According to the list of required and optional literature
13.03.2019.	Herd health and production management (2)	Anamaria Ekert Kabalin, PhD, Full Professor Sven Menčik, PhD, Assistant Professor	Department of Animal Breeding and Livestock Production / 8.00 -10.00	According to the list of required and optional literature
14.03.2019.	Training and use of horses. Breeding and exploitation of laboratory animals and rabbits	Maja Maurić, PhD, Assistant Professor	Department of Animal Breeding and Livestock Production / 10.00 -12.00	According to the list of required and optional literature
18.03.2019.	Training and exploitation of dogs. Raising cats	Anamaria Ekert Kabalin, PhD, Full Professor	Department of Animal Breeding and Livestock Production / 10.00 -12.00	According to the list of required and optional literature

Timetable for SEMINARS academic year 2018-2019 (4th semester)

SEMINARS					
Date	Methodological unit	Teacher	Group	Location / time	Literature

Timetable for PRACTICALS academic year 2018-2019 (4th semester)

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical	Group	Location / time	Literature
04.03.2019.	Technological basics in the production of milk	Teachers and associates of the Department	Practicals in practicum		Department of Animal Breeding and Livestock Production / 12.00 -14.00	Lectures and written preparations for specific practical topics
07.03.2019.	Technological basics in the production of beef meat	Teachers and associates of the Department	Practicals in practicum		Department of Animal Breeding and Livestock Production / 10.00 -12.00	Lectures and written preparations for specific practical topics
11.03.2019.	Colloquium 3	Teachers and associates of			Department of	Practicals 1 and 2

		the Department	Practicals in practicum		Animal Breeding and Livestock Production / 8.00 -10.00	Lectures
15.03.2019.	Farm for the production of beef meat	Teachers and associates of the Department	Field practicals		10.00 -16.00	Lectures and written preparations for specific practical topics
18.03.2019.	Technological basics in the production of poultry meat and poultry eggs	Teachers and associates of the Department	Practicals in practicum		Department of Animal Breeding and Livestock Production / 8.00 -10.00	Lectures and written preparations for specific practical topics
21.03.2019.	The basics of dogs training. Basics of breeding and raising of rabbits and the most common cage pets	Teachers and associates of the Department	Practicals in practicum		Department of Animal Breeding and Livestock Production / 14.00 -16.00	Lectures and written preparations for specific practical topics
22.03.2019.	Horse stud farm. Cattle dairy farm	Teachers and associates of the Department	Field practicals		8.00 -16.00	Lectures and written preparations for specific practical topics
26.03.2019.	Colloquium 4	Teachers and associates of the Department	Practicals in practicum		Department of Animal Breeding	Practicals 5 and 6 Lectures

					and Livestock Production / 10.00 -12.00	
12.04.2019.	Laying hens farm	Teachers and associates of the Department	Field practicals		10.00 -16.00	Lectures and written preparations for specific practical topics
10.05.2019.	Different farm models for the production of beef meat	Teachers and associates of the Department	Field practicals		10.00 -16.00	Lectures and written preparations for specific practical topics

STUDENT OBLIGATIONS

	During 4 rd semester maximal number of points from this evaluation element is 4 (minimal is 2 points). The student must attend at least 11 hours of lectures	
	<u>Lecture attendance (hours)</u>	<u>Number of points</u>
Lecture attendance	10 or less	0 (dissatisfied)
	11	2.0 (minimal)
	12	2.18
	13	2.36
	14	2.54
	15	2.72
	16	2.90
	17	3.08
	18	3.26
	19	3.44
	20	3.62
	21	3.80
	22	4.0 (maximal)

Seminars attendance																
Practicals attendance	<p>A total of 24 hours is performed in 6 intramural and 4 extramural practicals. Students are obliged to attend at least 70% of intramural and all extramural practicals (in the case of a justified absence from a extramural practical, the student must prepare written report about the practical topic). During 4th semester maximal number of points from this evaluation element is 4 (minimal is 3 points)</p> <table> <thead> <tr> <th><u>Practicals (intramural) attendance</u></th> <th><u>Number of points</u></th> </tr> </thead> <tbody> <tr> <td>3 or less + 4 extramural practicals</td> <td>0 (dissatisfied)</td> </tr> <tr> <td>4 + 4 extramural practicals</td> <td>3.0 (minimal)</td> </tr> <tr> <td>5 + 4 extramural practicals</td> <td>3.5</td> </tr> <tr> <td>6 + 4 extramural practicals</td> <td>4.0 (maximal)</td> </tr> </tbody> </table>	<u>Practicals (intramural) attendance</u>	<u>Number of points</u>	3 or less + 4 extramural practicals	0 (dissatisfied)	4 + 4 extramural practicals	3.0 (minimal)	5 + 4 extramural practicals	3.5	6 + 4 extramural practicals	4.0 (maximal)					
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5 + 4 extramural practicals	3.5															
6 + 4 extramural practicals	4.0 (maximal)															
Active participation in seminars and practicals	<p>For each successfully completed practical assignment the student gets 0.5 points.</p> <table> <thead> <tr> <th><u>Activity on practicals</u></th> <th><u>Number of points</u></th> </tr> </thead> <tbody> <tr> <td>4 intramural practicals + 4 extramural practicals</td> <td>2.0 (minimal)</td> </tr> <tr> <td>5 intramural practicals + 4 extramural practicals</td> <td>2.5</td> </tr> <tr> <td>6 intramural practicals + 4 extramural practicals</td> <td>3.0 (maximal)</td> </tr> </tbody> </table> <p>The remaining activity points (maximal up to 4.0) are achieved with successful oral answers and presentations on practicals.</p>	<u>Activity on practicals</u>	<u>Number of points</u>	4 intramural practicals + 4 extramural practicals	2.0 (minimal)	5 intramural practicals + 4 extramural practicals	2.5	6 intramural practicals + 4 extramural practicals	3.0 (maximal)							
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Final exam	<p>The final exam consists of a written and oral part. To access to the written part student must fulfill the obligations of 3rd and 4th semesters according to the following table:</p> <table> <thead> <tr> <th><u>Type of activity</u></th> <th><u>Minimal points</u></th> <th><u>Maximal points</u></th> </tr> </thead> <tbody> <tr> <td>Lecture attendance</td> <td>3</td> <td>6</td> </tr> <tr> <td>Seminar and practicals attendance</td> <td>8</td> <td>12</td> </tr> <tr> <td>Active participation in seminars and practicals</td> <td>5</td> <td>10</td> </tr> <tr> <td>Continuous knowledge-checking</td> <td>20</td> <td>32</td> </tr> </tbody> </table>	<u>Type of activity</u>	<u>Minimal points</u>	<u>Maximal points</u>	Lecture attendance	3	6	Seminar and practicals attendance	8	12	Active participation in seminars and practicals	5	10	Continuous knowledge-checking	20	32
<u>Type of activity</u>	<u>Minimal points</u>	<u>Maximal points</u>														
Lecture attendance	3	6														
Seminar and practicals attendance	8	12														
Active participation in seminars and practicals	5	10														
Continuous knowledge-checking	20	32														

	Total	36	60
	Number of points on the written and oral part of the final exam:		
	<u>Final exam</u>	<u>Minimal points</u>	<u>Maximal points</u>
	Written part	12	20
	Oral part	depends on the number of points on a written exam*	20
	*In total, students must have at least 24 points on the written and oral part of the exam. The score for the oral exam can not be less than 5		
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 practicals.		

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	After two colloquia in 3 rd semester, students must successfully solve colloquia 3 and 4 in 4 th semester Colloquium 3: minimal 5 points, maximal 8 points Colloquium 4: minimal 5 points, maximal 8 points
Final exams (dates)	March 21st 2019, April 24th 2019, May 20th 2019, June 10th 2019, June 27th 2019, July 10th 2019, September 6th 2019, September 20th 2019
Form of final exam	Written and oral

LITERATURE

Obligatory literature	Radostits, O.M.: Herd Health. W.B. Saunders Company. Philadelphia, 2001.; Brand, Nordhuisen, Schukken: Herd health and production management in dairy practice, 1997.; Lasley, J.F.: Genetics of Livestock Improvement. Prentice-Hall, Inc., New Jersey, 1987.; Jiang, Ott: Reproductive genomics in domestic animals, 2010.; FAO: Marker
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	assisted selection, 2007.; Pierce: Genetics, 2003.; Muir, Aggrey: Poultry genetics, breeding and biotechnology, 2003.; Houghton Brown, Pilliner, Davies: Horse and stable management, 2003.; Root Kustritz: The dog breeders guide to successful breeding and health management, 2006.; Vella, Shelton, McGonagle, Stanglein: Robinsons genetics for cat breeders and veterinarians, 2003.
Optional literature	Lokhorst, Groot Koerkamp: Precision livestock farming, 2009.; Axford, Bishop, Nicholas, Owen: Breeding for disease resistance in farm animals, 2000.; Field, Taylor: Scientific farm animal production, 2009.

OBJECTIVES AND LEARNING OUTCOMES

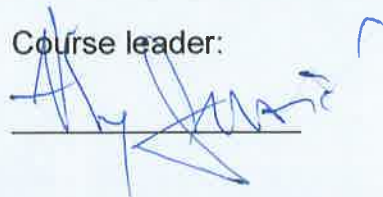
Course objectives	The objective of the course Animal breeding and production is to teach students of veterinary medicine how to evaluate and improve genetic basis of animals. In the 4 th semester special attention is focused on different production systems and the way of using animal genetics to improve quantity and quality of production and in the same time how production influence on animal health.
Learning outcomes	After successfully completion of the course students will be able to: <ul style="list-style-type: none"> - understand the role of genetic basis in different ways of breeding and exploiting animals - apply different methods to improve the genetic basis of animals with respect to specific breeding traits - identify various animal production systems - gather animal health and production data - analyze animal health and production data - setting the goals in cooperation with farmer - control advancement according to set goals

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