

UNIVERSITY OF ZAGREB
 FACULTY OF VETERINARY MEDICINE
 Vjekoslav Heinzel Str 55
 Tel. 01/23 90 320
 Division: Clinic Division
 Clinic for Obstetrics and Reproduction
 Email: jgrizelj@vef.hr
 Register no.:
 File no.:
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117578	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	08.02.2021	
Klasifikacijska oznaka	Org. jed.	
605-03/20-04/25	251-61-22; 251-61-32;	
Urudžbeni broj	Prilozi	Vrijednost
251-61-22-21-83	0	-

COURSE SYLLABUS

Course name: Obstetrics and Reproduction 1

Academic year 2020-21

Course leader: Juraj Grizelj, full professor

Teachers: Tomislav Dobranić, full professor, Tugomir Karadjole, full professor; Nikica Prvanović Babić, full professor, Marko Samardžija, full professor, Iva Getz, associated professor, Martina Lojkić, associated professor, Silvijo Vince, associated professor, Ivan Folnožić, assistant professor, Branimira Špoljarić, assistant professor

Associate teachers: Ivan Butković, DVM; Juraj Šavorić, DVM

First day of classes: 22 February 2021

Last day of classes: 27 May 2021

Timetable for LECTURES academic year 2020-2021

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
22.02.21.	Hormonal Regulation of Reproductive Cycle	Marko Samardžija, full professor	12-14h Clinic for Obstetrics and Reproduction (COR) Obstetrics Practicals Room	Obligatory literature
23.02.21.	Cows' and Heifers' Reproductive Cycle 1	Branimira Špoljarić, assistant professor	8-10h COR Practicals Room	Obligatory literature
24.02.21.	Cows' and Heifers' Reproductive Cycle 2	Branimira Špoljarić, assistant professor	10-12h COR Practicals Room	Obligatory literature
25.02.21.	Reproductive Cycle of Mares	Juraj Grizelj, full professor	12-14h COR Practicals Room	Obligatory literature
26.02.21.	Reproductive Cycle of Sows	Marko Samardžija, full professor	8-10h COR Practicals Room	Obligatory literature
01.03.21.	Reproductive Cycle of Goats and Sheep	Branimira Špoljarić, assistant professor	8-10h COR Practicals Room	Obligatory literature
02.03.21.	Reproductive Cycle of Bitches and Cats	Ivan Folnožić, assistant professor	12-14 COR Practicals Room	Obligatory literature
04.03.21.	Oogenesis and follicular development	Martina Lojkić, associated professor	10-12 COR Practicals Room	Obligatory literature
08.03.21.	Hormonal Regulation of Ovulation	Martina Lojkić, associated professor	10-12h COR Practicals Room	Obligatory literature

10.03.21.	Fertilization and Nidation 1	Martina Lojkić, associated professor	14-16h COR Practicals Room	Obligatory literature
11.03.21.	Fertilization and Nidation 2	Nikica Prvanović Babić, full professor	13-15h COR Practicals Room	Obligatory literature
15.03.21.	Fertilization and Nidation 3	Nikica Prvanović Babić, full professor	10-12h COR Practicals Room	Obligatory literature
16.03.21.	Pregnancy Diagnosis 1	Iva Getz, associated professor	10-12h COR Practicals Room	Obligatory literature
17.03.21.	Pregnancy Diagnosis 2	Iva Getz, associated professor	8-10h COR Practicals Room	Obligatory literature
18.03.21.	Pathology of Pregnancy 1	Iva Getz, associated professor	10-12h COR Practicals Room	Obligatory literature
19.03.21.	Pathology of Pregnancy 2	Silvijo Vince, associated professor	12-14h COR Practicals Room	Obligatory literature
22.03.21.	Pathology of Pregnancy 3	Silvijo Vince, associated professor	11-13h COR Practicals Room	Obligatory literature
24.03.21.	Physiology of Labour and Delivery 1	Nikica Prvanović Babić, full professor	8-10h COR Practicals Room	Obligatory literature
30.03.21.	Physiology of Labour and Delivery 2	Nikica Prvanović Babić, full professor	10-12h COR Practicals Room	Obligatory literature
31.03.21.	Spermiology 1	Martina Lojkić, associated professor	10-12h COR Practicals Room	Obligatory literature

13.04.21.	Spermiology 2	Marko Samardžija, full professor	10-12h COR Practicals Room	Obligatory literature
15.04.21.	Artificial Insemination	Juraj Grizelj, full professor	13-15h COR Practicals Room	Obligatory literature
16.04.21.	Physiology and Pathology of the Puerperium 1	Ivan Folnožić, assistant professor	14-16h COR Practicals Room	Obligatory literature
26.04.21.	Physiology and Pathology of the Puerperium 2	Ivan Folnožić, assistant professor	13-15h COR Practicals Room	Obligatory literature
27.04.21.	Physiology and Pathology of the Puerperium 3	Silvijo Vince, associated professor	13-15h COR Practicals Room	Obligatory literature
29.04.21.	Physiology and Pathology of the Puerperium 4	Silvijo Vince, associated professor	13-15h COR Practicals Room	Obligatory literature
05.05.21.	Physiology and Pathology of the Udder 1	Ivan Folnožić, assistant professor	10-12h COR Practicals Room	Obligatory literature
06.05.21.	Physiology and Pathology of the Udder 2	Branimira Špoljarić, assistant professor	10-12h COR Practicals Room	Obligatory literature
07.05.21.	Physiology and Pathology of the Udder 3	Juraj Grizelj, full professor	10-12h COR Practicals Room	Obligatory literature
12.05.21.	Selected Topics	Juraj Grizelj, full professor, Nikica Prvanović Babić, full professor	8-10h COR Practicals Room	Obligatory literature

Timetable for SEMINARS academic year 2020-2021

SEMINARS					
Date	Methodological unit	Teacher	Group	Location / time	Literature

Timetable for PRACTICALS academic year 2020-2021

PRACTICALS						
Date	Methodological unit	Teacher	Type of Practicals	Group	Location / time	Literature
01.03.21.	Introductory Information on the Course; Anatomy of the Female Reproductive System	Juraj Grizelj, full professor; Ivan Butković, DVM	Clinical practice	1	10-12.15h COR Practicals Room	Obligatory literature
03.03.21.	Anatomy of the Female Reproductive System, Dissection	Juraj Šavorić, DVM, Ivan Butković, DVM	Clinical practice	1	10-12h COR Practicals Room	Obligatory literature
05.03.21.	General Gynaecologic History and Examination	Ivan Butković, DVM Juraj Šavorić, DVM	Clinical practice	1	10-12.15h COR Practicals Room	Obligatory literature
09.03.21.	General Gynaecologic History and Examination	Ivan Folnožić, assistant professor, Juraj Grizelj, full professor;	Clinical practice	1	10-12.15 COR Practicals Room	Obligatory literature
11.03.21.	Gynaecologic Examination of Cows	Marko Samardžija, full professor, Silvijo Vince, associated professor	Clinical practice	1	10-12.15h COR Bovine Stable	Obligatory literature

12.03.21.	Gynaecologic Examination of Cows	Juraj Grizelj, full professor, Branimira Špoljarić, assistant professor	Clinical practice	1	8-10.15h COR Bovine Stable	Obligatory literature
15.03.21.	Gynaecologic Examination of Cows	Silvijo Vince, associated professor, Ivan Folnožić, assistant professor	Clinical practice	1	12-14.15h COR Bovine Stable	Obligatory literature
16.03.21.	Gynaecologic Examination of Cows	Iva Getz, associated professor, Ivan Butković DVM	Clinical practice	1	12-14.15h COR Bovine Stable	Obligatory literature
17.03.21.	Gynaecologic Examination of Mares	Nikica Prvanović Babić, full professor, Iva Getz, associated professor	Clinical practice	1	10-12.15h COR Equine Premises	Obligatory literature
23.03.21.	Gynaecologic Examination of Mares	Iva Getz, associated professor, Juraj Grizelj, full professor	Clinical practice	1	10-12.15h COR Equine Premises	Obligatory literature
24.03.21.	Gynaecologic Examination of Small Ruminants	Branimira Špoljarić, assistant professor, Silvijo Vince, associated professor	Clinical practice	1	10-12.15h COR Small Ruminants' Stable	Obligatory literature
25.03.21.	Gynaecologic Examination of pets and/or Gynaecologic Surgical Operations	Tugomir Karadjole, full professor; Ivan Butković, DVM	Clinical practice	1	9-11h COR Surgeries and/or Operating Theatres	Obligatory literature
29.03.21.	Gynaecologic Examination of pets and/or Gynaecologic Surgical Operations	Tugomir Karadjole, full professor; Juraj Šavorić, DVM	Clinical practice	1	10-13h COR Surgeries and/or Operating Theatres	Obligatory literature
06.04.21.	Gynaecologic Examination of Cows	Juraj Šavorić, DVM	Clinical practice	1	10-13h Bovine Farm "Sljeme"	Obligatory literature

14.04.21.	Anatomy of the Male Reproductive System, Dissection	Martina Lojkić, associated professor, Marko Samardžija, full professor	Clinical practice	1	10-12.15h COR Practicals Room	Obligatory literature
15.04.21.	Anatomy of the Male Reproductive System	Marko Samardžija, full professor, Ivan Folnožić, assistant professor	Clinical practice	1	10-13h COR Practicals Room	Obligatory literature
16.04.21.	Anatomy of the Male Reproductive System, Revision	Ivan Butković, DVM, Martina Lojkić, associated professor	Clinical practice	1	10-13h COR Practicals Room	Obligatory literature
26.04.21.	Andrologic Examination and Semen Examination 1	Martina Lojkić, associated professor, Marko Samardžija, full professor	Clinical practice	1	10-13h COR Spermiology Practicals Room	Obligatory literature
27.04.21.	Semen Examination 2	Martina Lojkić, associated professor, Ivan Butković, DVM	Clinical practice	1	10-13h COR Spermiology Practicals Room	Obligatory literature
28.04.21.	Gynaecologic Examination of pets and/or Gynaecologic Surgical Operations	Silvijo Vince, associated professor, Ivan Butković, DVM	Clinical practice	1	10-13h COR Surgeries and/or Operating Theatres	Obligatory literature
29.04.21.	Semen Examination, Revision	Martina Lojkić, associated professor, Juraj Šavorić, DVM	Clinical practice	1	10-13h COR Practicals Room	Obligatory literature
03.05.21.	Vaginal Smears Examination	Juraj Šavorić, DVM, Branimira Špoljarić, assistant professor	Clinical practice	1	10-13h COR Practicals Room	Obligatory literature

04.05.21.	Vaginal Smears Examination, Revision	Ivan Butković, DVM, Juraj Grizelj, full professor	Clinical practice	1	13-16h COR Practicals Room	Obligatory literature
11.05.21.	Gynaecologic Examination of pets and/or Gynaecologic Surgical Operations	Ivan Folnožić, assistant professor, Juraj Šavorić, DVM	Clinical practice	1	10-13h COR Surgeries and/or Operating Theatres	Obligatory literature
12.05.21.	Udder Examination	Ivan Butković, DVM, Juraj Šavorić, DVM	Clinical practice	1	10-13h COR Practicals Room	Obligatory literature
14.05.21.	Gynaecologic Examination of Cows	Ivan Folnožić, assistant professor	Clinical practice	1	7.30-14h Dairy Farm Bjelovar	Obligatory literature
18.05.21.	Udder Examination	Silvijo Vince, associated professor, Juraj Grizelj, full professor	Clinical practice	1	10-13h COR Bovine Stable	Obligatory literature
19.05.21.	Gynaecologic Examination of pets and/or Gynaecologic Surgical Operations	Ivan Folnožić, assistant professor, Juraj Šavorić DVM	Clinical practice	1	10-12.15h COR Surgeries and/or Operating Theatres	Obligatory literature
27.05.21.	Clinical Night Shift	Ivan Butković, DVM, Juraj Šavorić, DVM	Clinical practice	1	18-22h COR Surgeries	Obligatory literature

STUDENT OBLIGATIONS

Lecture attendance	By attending lectures the student gains 3-6 points (60 lecture hours; each lecture hour equals a 0,1 coefficient). Students must attend at least 30 lecture hours.
Seminars attendance	-
Practicals attendance	By attending practicals the student gains 8-12 points (105 exercise hours; each practicals hour equals a 0,11 coefficient). Students must attend at least 73 practicals hours.
Active participation in seminars and Practical	A minimum of 5 (max. 10) points must be gained during practicals, which consists of the completion of a minimum of 3 (max. 6) positively evaluated assignments imposed by teacher and based on active participation during practicals (signed off by the teacher), 1 (max 2) field assignment and 1 (max 2) positive answer on short oral exams.
Final exam	<p>Students' attendance of lectures and practicals as well as their active participation will regularly be monitored over the course of the entire semester.</p> <p>There will also be continuous knowledge-checking (progress test). The total points earned will be presented to the examiner at the final exam.</p> <p>In order to take the final exam, a student must earn a minimum of 16 points by attending lectures and practicals and through activities during practicals, and at least 20 points from continuous knowledge assessment.</p> <p>The final exam consists of 10 oral questions and in total brings up to 40 points (minimal 24 points is approval).</p> <p>The total sum of points achieved from the above-mentioned elements is expressed in the final mark (1 – 5), 1 being a fail.</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 practicals.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	<p>There will be a written progress test performed during the semester consisting of 10 questions. The progress test brings 32 points (each question equals 3.1 points), 20 points being the minimum required to pass. Taking the progress test during the main term is compulsory (missing the main term needs to be justified).</p> <p>3 additional progress test terms will be announced for the progress test in agreement with students. All four of the terms will be held in June and July.</p> <p>Progress test is required in order to register for the final exam. However, the progress test is not a requirement for a signature in the grade book. If the student fails the progress test 4 times, he/she needs to take the whole course over again. In case he/she doesn't take the progress test or fails it 4 times, an additional term is possible if the student representative writes an official request to the respective Vice Dean. The Course leader makes the final decision.</p>
Final exams (dates)	16.06.2021., 30.06.2021., 08.07.2021., 01.09.2021., 15.09.2021.
Form of final exam	<p>In order to take the final exam, a student must earn a minimum of 16 points by attending lectures and practicals and through activities during practicals, and at least 20 points from continuous knowledge assessment.</p> <p>The final exam consists of 10 oral questions and in total brings up to 40 points (minimal 24 points is approval).</p> <p>The total sum of points achieved from the above-mentioned elements is expressed in the final mark (1 – 5), 1 being a fail.</p>

LITERATURE

Obligatory literature	<p>Lecture handouts by LMS</p> <p>Selected chapters from:</p> <p>Noakes, D. E., T. J. Parkinson and G. C. W. England (2009): Veterinary Reproduction & Obstetrics, 9th edition. W. B. Saunders Company Ltd.</p> <p>Gordon, I. (1997): Controlled Reproduction in Pigs. CAB International.</p> <p>Blanchard, T. L et al., (2003): Manual of Equine Reproduction. Mosby.</p> <p>Simpson, G. (2008): BSAVA Manual of Small Animal Reproduction and Neonatology. British Small Animal Association. Gloucester</p> <p>Johnston, S. D., M. V. Root Kustritz, P. S. Olson (2003): Canine and Feline Theriogenology. Saunders Company Ltd.</p> <p>Jackson, P. G. G. (2004): Handbook of Veterinary Obstetrics. Saunders W. B. Company.</p>
Optional literature	<p>Selected chapters from:</p> <p>BSAVA Manual of Canine and Feline Abdominal Surgery. Williams and Niles (eds.), BSAVA, 2005</p> <p>Gary Landsberg, Wayne L. Hunthausen, Lowell J. Ackerman (2003): 5.Handbook of Behavioural Problems of the Dog and Cat. Saunders</p> <p>Angus O. McKinnon (1993): Equine Reproduction. LEA & FEBIGER</p> <p>JC Samper (2000): Equine Breeding Management and Artificial Insemination. Saunders</p> <p>The Merck Veterinary Manual, 10th edition, (2010), Merck & Co.</p> <p>Hafez (1993): Reproduction in Farm Animals. Lea and Febiger.</p> <p>Pugh (2002): Sheep and Goat Medicine. Saunders</p> <p>Smith and Sherman (2009): Goat Medicine. Wiley Blackwell</p> <p>Solaiman (2010): Goat Science and Production. Wiley Blackwell</p> <p>Paterson, B. (2001): Colour Atlas of Clinical Anatomy of the Dog and Cat. Mosby</p> <p>Wagner H. (1995): The Biology and Medicine of Rabbits and Rodents. Williams & Wilkins</p> <p>Baker L. (2000): Colour Atlas of Cytology of the Dog and Cat, Mosby</p>

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	<p>Within the course framework, the students will get acquainted in detail with the hormonal regulation of the reproductive cycle of domestic animals, including phases, a clinical view of reproductive cycles and the artificial insemination of domestic animals. Students will also be thoroughly familiarized with oogenesis, the mechanism of ovulation, fertilization, nidation and placentation, as well as pregnancy, pregnancy diagnostics and pathology of pregnancy and the phases of parturition, physiology and pathology of puerperium, spermiology, and udders.</p>
Learning outcomes	<p>To be able to independently take the gynaecologic history and perform gynaecologic / andrological examinations (including udders) of female and male animals, including rectal palpation and ultrasound checking, in order to define the animal's reproductive status.</p> <p>To be able to timely perform artificial insemination, understand the principles of semen collection and insemination dose, and perform basic semen tests.</p> <p>To be able to properly assist labour and apply obstetrical methods in case of need.</p> <p>To check post-parturient animal and determine if the puerperium of the animal is running physiologically; and if not, to be able to assess the proper therapeutic approach.</p> <p>To assess general conditions at the farm level which influence optimal animal reproduction and milk production, overall animal production at the farm level, animal welfare and safety of animal products;</p> <p>to explain the neurohormonal regulation of sexual cycles of domestic animals;</p> <p>to independently perform andrologic and gynaecologic examinations of domestic animals;</p> <p>to clearly distinguish phases and clinical specificity of the sexual cycle of domestic animals;</p> <p>to apply proper methods of pregnancy diagnostics;</p> <p>to be acquainted with the physiology and pathology of puerperium;</p> <p>to be acquainted with the physiology and pathology of the mammary gland;</p> <p>to identify and explain the stages of parturition.</p>

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.