

Anatomy with Organogenesis of Domestic Animals II

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE
Heinzelova 55
Tel. 01/239 249
Division: Basic and Pre-clinical Sciences Division
Organizational unit: Anatomy, Histology and Embryology
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Register No of the organisational unit: 61-05-2023/57
Zagreb, 01/02/2023



159531	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	07.02.2023	
Klasifikacijska oznaka	Org. jed.	
605-03/22-04/35	251-61-32;	
Urudžbeni broj	Prilozi	Vrijednos
251-61-05-23-57	0	-

COURSE SYLLABUS

Course name: Anatomy with Organogenesis of Domestic Animals II

Academic year 2022/2023

Course leader: Assist. Prof. Ivan Alić
Deputy course leader: Full Prof. Martina Đuras

Teachers: Full Prof. Martina Đuras; Full Prof. Srebrenka Nejedli; Full Prof. Tajana Trbojević Vukičević; Assist. Prof. Ivan Alić; Assist. Prof. Mirela Pavić Vulinović; teaching assistant Magdalena Kolenc, DVM; teaching assistant Kim Korpes, DVM; teaching assistant Denis Leiner, DVM; teaching assistant Ante Plećaš, DVM

First day of classes: 27/02/2023
Last day of classes: 02/06/2023

Timetable for LECTURES academic year 2022/2023

LECTURES				
Date	Methodological unit	Teacher	Location / Time	Literature
27/02/2023 1 st lecture	L1_Structure and development of the trunk skeleton	Full Prof. Tajana Trbojević Vukičević	Amphitheatre/ 12pm-1pm	KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color atlas. 3rd Ed. Schattauer, Stuttgart, New York. DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4th Ed. Saunders Elsevier, Philadelphia. McGEADY, T. A., P. J. QUINN, E. S. FITZPATRICK, M. T. RYAN (2006): Veterinary embryology. Blackwell Publishing, Dublin.
01/03/2023 2 nd lecture	L2_Structure and development of the mammary gland	Full Prof. Tajana Trbojević Vukičević	Amphitheatre/ 12pm-1pm	
06/03/2023 3 rd lecture	L3_Body wall, body cavities and their serous lining	Full Prof. Tajana Trbojević Vukičević	Amphitheatre/ 10am-12am	
09/03/2023 4 th lecture	L4_Structure and development of the trachea and lungs	Full Prof. Srebrenka Nejedli	Amphitheatre/ 10am-11am	
23/03/2023 5 th lecture	L5_Structure and development of the heart	Assist. Prof. Ivan Alić	Amphitheatre/ 8am-10am	
24/03/2023 6 th lecture	L6_Autonomic nervous system of the trunk	Assist. Prof. Ivan Alić	Amphitheatre/ 1pm-2pm	
24/03/2023 7 th lecture	L7_Lymphatic system and endocrine tissue of the trunk	Assist. Prof. Ivan Alić	Amphitheatre/ 2pm-3pm	
27/03/2023 8 th lecture	L8_Blood vessels of the trunk	Full Prof. Srebrenka Nejedli	Amphitheatre/ 1:30pm-2:30pm	
18/04/2023 9 th lecture	L9_Structure and development of the digestive system - Part I	Full Prof. Martina Đuras	Amphitheatre/ 8am-10am	
19/4/2023 10 th lecture	L10_Structure and development of the digestive system - Part II	Full Prof. Martina Đuras	Amphitheatre/ 8am-10am	
03/05/2023 11 th lecture	L11_Structure and development of the urinary system	Full Prof. Srebrenka Nejedli	Amphitheatre/ 10am-12am	
08/05/2023 12 th lecture	L12_Structure and development of the female genital organs	Assist. Prof. Mirela Pavić Vulinović	Amphitheatre/ 12pm-2pm	
09/05/2023 13 th lecture	L13_Structure and development of the male genital organs	Assist. Prof. Mirela Pavić Vulinović	Amphitheatre/ 10am-12am	

Timetable for PRACTICALS academic year 2022/2023

PRACTICALS						
Date	Methodological unit	Teacher	Type of practical (Article 31. of Regulation)	Group	Location / time	Literature
28/02/2023 1 st practical	P1_Thoracic vertebrae	teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color atlas. 3rd Ed. Schattauer, Stuttgart, New York
01/03/2023 2 nd practical	P2_Lumbar and sacral vertebrae	Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	
02/03/2023 3 rd practical	P3_Ribs and sternum	Assist. Prof. Mirela Pavić Vulinović Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
03/03/2023 4 th practical	P4_Mammary gland	Full Prof. Srebrenka Nejedli Assist. Prof. Ivan Alić Full Prof. Martina Đuras	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4th Ed. Saunders Elsevier, Philadelphia.
07/03/2023 5 th practical	P5_Regions of the trunk External fascia of the trunk. Cutaneous muscles.	teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli Assist. Prof. Mirela Pavić Vulinović	Dissection	1,2,3	Dissection Hall, AHE/10am-12am	
08/03/2023 6 th practical	P6_Muscles of the pectoral girdle	teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli	Dissection	1,2,3	Dissection Hall, AHE/10am-12am	
10/03/2023 7 th practical	P7_Respiratory muscles	Assist. Prof. Ivan Alić teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	DONE, S. H., P. C. GOODY, S. A. EVANS, N. C. STICKLAND (2009): Color atlas of veterinary anatomy. Volume 3. The dog and cat. 2nd Ed. Mosby Elsevier, Edinburgh, London, New York.
13/03/2023 8 th practical	P8_Internal fascia of the trunk. Thoracic cavity	teaching assistant Denis Leiner, DVM Assist. Prof. Mirela Pavić Vulinović teaching assistant Kim Korpes, DVM	Dissection	1,2,3	Dissection Hall, AHE/2:30pm-4pm	
15/03/2023 9 th practical	P9_Pectoral cavity and diaphragm	Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
16/03/2023	P10_Pleurae and	teaching assistant Ante Plečaš, DVM	Dissection	1,2,3	Dissection Hall,	

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10 th practical	pleural cavities	Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM			AHE/10am-12am	EVANS, H. E., A. de LAHUNTA (2010): Guide to the dissection of the dog. 7th Ed. Saunders Elsevier. Philadelphia.
17/03/2023 11 th practical	P11_Trachea and lungs	Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
20/03/2023 12 th practical	P12_Pulmonary root and hilus	Assist. Prof. Ivan Alić Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	
21/03/2023 13 th practical	P13_Bronchial tree	Full Prof. Srebrenka Nejedli Assist. Prof. Mirela Pavić Vulinović Full Prof. Martina Đuras	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
24/03/2023 14 th practical	P14_Medial mediastinum and pericardium	teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli Assist. Prof. Mirela Pavić Vulinović	Dissection	1,2,3	Dissection Hall, AHE/3pm-5pm	
28/03/2023 15 th practical	P15_External heart	teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
29/03/2023 16 th practical	P16_Heart chambers	Assist. Prof. Mirela Pavić Vulinović teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM	Dissection	1,2,3	Dissection Hall, AHE/10am-12am	
30/03/2023 17 th practical	P17_Heart supply	teaching assistant Denis Leiner, DVM Assist. Prof. Mirela Pavić Vulinović teaching assistant Kim Korpes, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
03/04/2023 18 th practical	P18_Aorta	Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM Assist. Prof. Mirela Pavić Vulinović	Dissection	1,2,3	Dissection Hall, AHE/10am-12am	
11/04/2023 19 th practical	P19_Mediastinum	teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	
12/04/2023 20 th practical	P20_Subclavian artery	Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
13/04/2023 21 st practical	P21_Autonomic nerves	Assist. Prof. Mirela Pavić Vulinović Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm	
14/04/2023 22 nd practical	P22_Abdominal muscles and abdominal cavity	Full Prof. Srebrenka Nejedli Assist. Prof. Ivan Alić Full Prof. Martina Đuras	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	

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17/04/2023 23 rd practical	P23_Simple stomach	teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, AHE/8am-10am
20/04/2023 24 th practical	P24_Composed stomach	teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli	Dissection	1,2,3	Dissection Hall, AHE/8am-10am
24/04/2023 25 th practical	P25_Peritoneal cavity and omenta	Assist. Prof. Ivan Alić teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM	Dissection	1,2,3	Dissection Hall, AHE/10am-12am
25/04/2023 26 th practical	P26_Intestine of carnivores	teaching assistant Denis Leiner, DVM Assist. Prof. Mirela Pavić Vulinović teaching assistant Kim Korpes, DVM	Dissection	1,2,3	Dissection Hall, AHE/10am-12am
26/04/2023 27 th practical	P27_Intestine of ruminants	Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, AHE/8am-10am
28/04/2023 28 th practical	P28_Intestine of pigs	teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm
02/05/2023 29 th practical	P29_Intestine of the horse	Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm
03/05/2023 30 th practical	P30_Liver	Assist. Prof. Mirela Pavić Vulinović Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm
04/05/2023 31 st practical	P31_Pancreas and spleen	Full Prof. Srebrenka Nejedli Assist. Prof. Mirela Pavić Vulinović Full Prof. Martina Đuras	Dissection	1,2,3	Dissection Hall, AHE/8am-10am
05/05/2023 32 nd practical	P32_Kidney and ureter	teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm
08/05/2023 33 rd practical	P33_Urinary bladder and urethra	teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli	Dissection	1,2,3	Dissection Hall, AHE/2pm-4pm
09/05/2023 34 th practical	P34_Female genital organs	Assist. Prof. Ivan Alić teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM	Dissection	1,2,3	Dissection Hall, AHE/8am-10am
11/05/2023 35 th practical	P35_Scrotum, testicle and epididymis	teaching assistant Denis Leiner, DVM Assist. Prof. Mirela Pavić Vulinović	Dissection	1,2,3	Dissection Hall, DAHE/8am-10am

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		teaching assistant Kim Korpes, DVM				
12/05/2023 36 th practical	P36_Deferens duct, male accessory glands and penis	Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, AHE/10am-12am	
15/05/2023 37 th practical	P37_Abdominal aorta and caudal vena cava	teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	
17/05/2023 38 th practical	P38_Pelvic vessels and nerves	Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM Full Prof. Tajana Trbojević Vukičević	Dissection	1,2,3	Dissection Hall, AHE/8am-10am	
18/05/2023 39 th practical	P39_Muscles of the back	Assist. Prof. Ivan Alić Full Prof. Martina Đuras teaching assistant Ante Plečaš, DVM	Dissection	1,2,3	Dissection Hall, AHE/2:30pm- 4:30pm	
22/05/2023 40 th practical	P40_Spine and spinal cord	Full Prof. Srebrenka Nejedli Assist. Prof. Mirela Pavić Vulinović Full Prof. Martina Đuras	Dissection	1,2,3	Dissection Hall, AHE/10am-12am	
24/05/2023 41 st practical	P41_Dissection of the carnivore	teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, Pat./8am-12am	
25/05/2023 42 nd practical	P42_Dissection of the pig	teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM Full Prof. Srebrenka Nejedli	Dissection	1,2,3	Dissection Hall, Pat./8am-12am	
26/05/2023 43 rd practical	P43_Dissection of the ruminant	Assist. Prof. Ivan Alić teaching assistant Kim Korpes, DVM teaching assistant Magdalena Kolenc, DVM	Dissection	1,2,3	Dissection Hall, Pat./12pm-4pm	
31/05/2023 44 th practical	P44_Dissection of the thoracal organs	teaching assistant Denis Leiner, DVM Assist. Prof. Mirela Pavić Vulinović teaching assistant Kim Korpes, DVM	Dissection	1,2,3	Dissection Hall, AHE/2pm-6pm	
02/06/2023 45 th practical	P45_Dissection of the abdominal organs	Full Prof. Tajana Trbojević Vukičević teaching assistant Denis Leiner, DVM Assist. Prof. Ivan Alić	Dissection	1,2,3	Dissection Hall, AHE/2pm-6pm	

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STUDENT OBLIGATIONS

Lecture attendance	The course has 20 hours of lectures. One hour of lecture (45 minutes) is equal to 0.3 points. Lecture attendance is graded with 6 points in total. The student has to attend at least 10 hours of lectures (3 points).
Practicals attendance	The course has 100 hours of practicals. One hour of practicals (45 minutes) is equal to 0.12 points. Practical session attendance is graded with 12 points in total. The student has to attend at least 80 hours of practicals (8 points).
Active participation in seminars and practicals	Active participation in the practical session is evaluated through short oral testing during practicals and is graded with 10 points in total. The student has to achieve at least 5 points.
Final exam	Oral exam is graded with 40 points in total. The student has to achieve at least 24 points at the oral exam.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine (2022). Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam. Article 41: a student can justifiably be absent from up to 50 % of the lectures; 20% of the seminars and 20 % of the exercises.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	There are two written tests. A maximum of 16 points per test can be achieved. The student has to achieve at least 10 points per test in order to pass. The points of both passed tests are summarized. Both tests are graded together with a maximum of 32 points. Passing these two tests is a pre-condition for taking the oral exam. Written test I will be held on 14/4/2023, 13-14, in the Large and Small Computer Hall (1 st repetition: 17/5/2023, 8-9, Large Computer Hall; 2 nd repetition: 12/6/2023, 8-9, Large Computer Hall). Written test II will be held on 6/6/2023, 11-12, in the Large and Small Computer Hall (1 st repetition: 12/6/2023, 8-9, Large Computer Hall; 2 nd repetition: 19/6/2023, 8-9, Large Computer Hall).
Final exams (dates)	14/6/2023, 28/6/2023, 10/7/2023, 6/9/2023, 21/9/2023
Form of final exam	Oral exam is graded with 40 points in total. The student has to achieve at least 24 points at the oral exam.

LITERATURE

Obligatory literature	KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color
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	atlas. 3rd Ed. Schattauer, Stuttgart, New York DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4th Ed. Saunders Elsevier, Philadelphia. DONE, S. H., P. C. GOODY, S. A. EVANS, N. C. STICKLAND (2009): Color atlas of veterinary anatomy. Volume 3. The dog and cat. 2nd Ed. Mosby Elsevier, Edinburgh, London, New York. EVANS, H. E., A. de LAHUNTA (2010): Guide to the dissection of the dog. 7th Ed. Saunders Elsevier. Philadelphia. McGEADY, T. A., P. J. QUINN, E. S. FITZPATRICK, M. T. RYAN (2006): Veterinary embryology. Blackwell Publishing, Dublin.
Optional literature	NICKEL, R., A. SCHUMMER, E. SEIFERLE (1986): The locomotor system of the domestic mammals. Volume I. Verlag Paul Parey, Berlin, Hamburg. NICKEL, R., A. SCHUMMER, E. SEIFERLE (1981): The circulatory system, the skin, and the cutaneous organs of the domestic mammals. Volume III. Verlag Paul Parey, Berlin, Hamburg. EVANS H. E., A. De LAHUNTA (2012): Miller's anatomy of the dog. 4th Ed. WB Saunders Company, Philadelphia, London. SCHALLER, O. (2007): Illustrated veterinary anatomical nomenclature. 2nd Ed. Ferdinand Enke Verlag, Stuttgart. HYTTEL, P., F. SINOWATZ, M. VEJLSTED (2010): Essentials of domestic animal embryology. Saunders Elsevier, Philadelphia. SADLER, T. W. (2006): Langman's medical embryology, Lippincott Williams & Wilkins a Wolters Kluwer business. 10th Ed. Philadelphia, Baltimore, New York.

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	The course presents the gross anatomy of domestic animals with the embryonic development of organs and organic systems to veterinary medicine students in order to ensure basic knowledge for other disciplines such as physiology, pathology and clinical courses.
Learning outcomes	Following successful completion of the course, students will be able to: 1. list and describe major anatomical structures of the trunk including the viscera of domestic mammals

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2. explain the development of the viscera
 3. apply anatomical nomenclature
 4. skilled communicate anatomical information
- utilize dissection skills

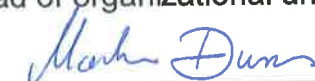
GRADING SCHEME

<i>Points</i>	<i>Grade</i>
Up to 59	1 (F)
60-76	2 (D,E)
77-84	3 (C)
85-92	4 (B)
93-100	5 (A)

Course leader


Assist. Prof. Ivan Alić

Head of organizational unit:


Full Prof. Martina Đuras

Note: The course leader is required to submit a Course Syllabus to all teachers and associates pertaining to the Cours