

2020-2021

## Anatomy with Organogenesis of Domestic Animals II

UNIVERSITY OF ZAGREB  
FACULTY OF VETERINARY MEDICINE  
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Tel. 01/ 2390243  
Division: Basic and Pre-clinical Sciences Division  
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Register no.: 61-05-2021/40  
Zagreb, 3/2/2021



117328	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	03.02.2021	
Klasifikacijska oznaka	Org. jed.	
605-03/20-04/25	251-61-05;251-61-32;	
Uredžbeni broj	Prilozi	Vrijednost
251-61-05-21-69	0	-

### COURSE SYLLABUS

Course name: Anatomy with Organogenesis of Domestic Animals II

Academic year 2020-21

Course leader: Assoc. Prof. Martina Đuras (MĐ)

Teachers: Prof. Srebrenka Nejedli (SN), Prof. Tajana Trbojević Vukičević (TTV), Assist. Prof. Mirela Pavić (MP)

Associate teachers: Denis Leiner, DVM (DL), Kim Korpes, DVM (KK), Magdalena Kolenc, DVM, (MK)

First day of classes: 22/2/2021

Last day of classes: 9/6/2021

Timetable for LECTURES academic year 2020-2021

LECTURES				
Date	Methodological unit	Teacher	Location / time	Literature
22/2/2021	Structure and development of the trunk skeleton	Prof. Tajana Trbojević Vukičević	MS Teams/ 11-12	<p>KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color atlas. 3<sup>rd</sup> Ed. Schattauer, Stuttgart, New York</p> <p>DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4<sup>th</sup> Ed. Saunders Elsevier, Philadelphia.</p> <p>McGEADY, T. A., P. J. QUINN, E. S. FITZPATRICK, M. T. RYAN (2006): Veterinary embryology. Blackwell Publishing, Dublin.</p>
26/2/2021	Structure and development of the mammary gland	Assoc. Prof. Martina Đuras	MS Teams/ 17-18	
3/3/2021	Body wall, body cavities and their serous lining	Assoc. Prof. Martina Đuras	MS Teams/ 10-12	
18/3/2021	Structure and development of the trachea and lungs	Prof. Srebrenka Nejedli	MS Teams/ 13-14	
24/3/2021	Autonomic nervous system of the trunk	Assist. Prof. Mirela Pavić	MS Teams/ 15:30–16:30	
26/3/2021	Lymphatic system and endocrine tissue of the trunk	Assist. Prof. Mirela Pavić	MS Teams/ 16:30-17:30	
6/4/2021	Structure and development of the heart	Assist. Prof. Mirela Pavić	Amphitheatre/ 14-16	
7/4/2021	Blood vessels of the trunk	Assist. Prof. Mirela Pavić	Amphitheatre/ 14-15	
27/4/2021	Structure and development of the digestive system (Part I)	Prof. Srebrenka Nejedli	Amphitheatre/ 14-16	
28/4/2021	Structure and development of the digestive system (Part II)	Prof. Srebrenka Nejedli	Amphitheatre/ 8-10	
13/5/2021	Structure and development of the urinary system	Prof. Tajana Trbojević Vukičević	Lecture Room, Department of Physics and Biophysics/ 8-10	
14/5/2021	Structure and development of the male genital organs	Prof. Tajana Trbojević Vukičević	Large Lecture Room / 10-12	
19/5/2021	Structure and development of the female genital organs	Assoc. Prof. Martina Đuras	Lecture Room, Department of Physics and Biophysics/ 10-12	

## Timetable for PRACTICALS academic year 2020-2021

Department of Anatomy, Histology and Embryology=DAHE; Department of Pathology=DP

PRACTICALS						
Date	Methodological unit	Teacher	Type of practicals	Group	Location / time	Literature
23/2/2021	Thoracic vertebrae	TTV, KK, MP	Dissection	1,2,3	Dissection Hall, DAHE/15-17	KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color atlas. 3 <sup>rd</sup> Ed. Schattauer, Stuttgart, New York  DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4 <sup>th</sup> 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. 2 <sup>nd</sup> Ed. Mosby Elsevier, Edinburgh, London, New York.  EVANS, H. E., A. de LAHUNTA (2010): Guide to the dissection of the dog.
25/2/2021	Lumbar and sacral vertebrae	TTV, KK, MP	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
26/2/2021	Ribs and sternum	TTV, KK, MP	Dissection	1,2,3	Dissection Hall, DAHE/9-11	
2/3/2021	Mammary gland	SN, MK, DL	Dissection	1,2,3	Dissection Hall, DAHE/10-12	
5/3/2021	Regions of the trunk External fascia of the trunk. Cutaneus muscles-	SN, MK, DL	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
9/3/2021	Muscles of the pectoral girdle	SN, MK, DL	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
11/3/2021	Respiratory muscles	MĐ, TTV, KK	Dissection	1,2,3	Dissection Hall, DAHE/12-14	
12/3/2021	Internal fascia of the trunk. Thoracic cavity	MĐ, TTV, KK	Dissection	1,2,3	Dissection Hall, DAHE/13-15	
15/3/2021	Pectoral cavity and diaphragm	MĐ, TTV, KK	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
16/3/2021	Pleurae and pleural cavities	MP, SN, MK	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
19/3/2021	Trachea and lungs	MP, SN, MK	Dissection	1,2,3	Dissection Hall, DAHE/15-17	
23/3/2021	Pulmonary root and hilus	MP, SN, MK	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
24/3/2021	Bronchial tree	DL, MĐ, TTV	Dissection	1,2,3	Dissection Hall, DAHE/10-12	
29/3/2021	Cranial mediastinum	DL, MĐ, TTV	Dissection	1,2,3	Dissection Hall, DAHE/9-11	
30/3/2021	Dorsal and ventral mediastinum	DL, MĐ, TTV	Dissection	1,2,3	Dissection Hall, DAHE/14:30-16:30	
6/4/2021	Caudal mediastinum	KK, MP, SN	Dissection	1,2,3	Dissection Hall,	

8/4/2021	Aorta	KK, MP, SN	Dissection	1,2,3	DAHE/8-10 Dissection Hall, DAHE/14-16	7 <sup>th</sup> Ed. Saunders Elsevier. Philadelphia.
9/4/2021	Subclavian artery	KK, MP, SN	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
12/4/2021	Pericardium and the external heart	MK, DL, MĐ	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
13/4/2021	Heart chambers	MK, DL, MĐ	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
14/4/2021	Cranial and caudal vena cava (thoracic part)	MK, DL, MĐ	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
16/4/2021	Abdominal muscles	TTV, KK, SN	Dissection	1,2,32	Dissection Hall, DAHE/8-10	
26/4/2021	Inguinal structures	TTV, KK, MP	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
27/4/2021	Abdominal and peritoneal cavity, omenta	TTV, KK, MP	Dissection	1,2,3	Dissection Hall, DAHE/10-12	
29/4/2021	Simple stomach	SN, MK, DL	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
30/4/2021	Composed stomach	SN, MK, DL	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
4/5/2021	Intestine of carnivores	SN, MK, DL	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
5/5/2021	Intestine of ruminants and pigs	MĐ, SN, KK	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
6/5/2021	Intestine of the horse	MĐ, SN, KK	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
11/5/2021	Liver	MĐ, SN, KK	Dissection	1,2,3	Dissection Hall, DAHE/14-16	
12/5/2021	Pancreas and spleen	MP, SN, MK	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
13/5/2021	Kidney and ureter	MP, SN, MK	Dissection	1,2,3	Dissection Hall, DAHE/10-12	
14/5/2021	Urinary bladder and urethra	MP, SN, MK	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
17/5/2021	Scrotum, testicle and epididymis	DL, MP, TTV	Dissection	1,2,3	Dissection Hall, DAHE/8-10	
18/5/2021	Deferens duct, male accessory	DL, MP, TTV	Dissection	1,2,3	Dissection Hall,	

	glands and penis				DAHE/8-10
19/5/2021	Female genital organs	DL, MP, TTV	Dissection	1,2,3	Dissection Hall, DAHE/14-16
20/5/2021	Abdominal aorta and caudal vena cava (abdominal part)	KK, MĐ, TTV	Dissection	1,2,3	Dissection Hall, DAHE/14-16
21/5/2021	Pelvic vessels and nerves	KK, MĐ, TTV	Dissection	1,2,3	Dissection Hall, DAHE/14:30-16:30
24/5/2021	Muscles of the back	KK, MĐ, TTV	Dissection	1,2,3	Dissection Hall, DAHE/10-12
27/5/2021	Spine and spinal cord	MK, DL, TTV	Dissection	1,2,3	Dissection Hall, DAHE/14-16
31/5/2021	Dissection of the pig	MĐ, MK, KK	Dissection	1,2,3	Dissection Hall, DP/14-17
1/6/2021	Dissection of the carnivore	KK	Dissection	3	Dissection Hall, DP/8-11
1/6/2021	Dissection of the carnivore	TTV, DL	Dissection	1,2	Dissection Hall, DP/11-14
7/6/2021	Dissection of the ruminant	MĐ, MP; MK	Dissection	1,2,3	Dissection Hall, DP/10-13
8/6/2021	Dissection of different organs	MP, SN, DL	Dissection	1,2,3	Dissection Hall, DAHE/8-11
9/6/2021	Dissection of the aorta, back and spine	MĐ, DL, MK	Dissection	1,2,3	Dissection Hall, DAHE/8-11

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 70 hours of practicals (8 points).
Active participation in 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. 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)	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 test is a pre-condition for taking the oral exam
Final exams (dates)	21/6/2021, 7/7/2021, 10/9/2021, 24/9/2021
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	<p>KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color atlas, 3<sup>rd</sup> Ed. Schattauer, Stuttgart, New York</p> <p>DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4<sup>th</sup> Ed. Saunders Elsevier, Philadelphia.</p> <p>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.</p> <p>EVANS, H. E., A. de LAHUNTA (2010): Guide to the dissection of the dog. 7<sup>th</sup> Ed. Saunders Elsevier. Philadelphia.</p> <p>McGEADY, T. A., P. J. QUINN, E. S. FITZPATRICK, M. T. RYAN (2006): Veterinary embryology. Blackwell Publishing, Dublin.</p>
Optional literature	<p>NICKEL, R., A. SCHUMMER, E. SEIFERLE (1986): The locomotor system of the domestic mammals. Volume I. Verlag Paul Parey, Berlin, Hamburg.</p> <p>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.</p> <p>EVANS H. E., A. De LAHUNTA (2012): Miller's anatomy of the dog. 4<sup>th</sup> Ed. WB Saunders Company, Philadelphia, London.</p> <p>SCHALLER, O. (2007): Illustrated veterinary anatomical nomenclature. 2nd Ed. Ferdinand Enke Verlag, Stuttgart.</p> <p>HYTTEL, P., F. SINOWATZ, M. VEJLSTED (2010): Essentials of domestic animal embryology. Saunders Elsevier, Philadelphia.</p> <p>SADLER, T. W. (2006): Langman's medical embryology, Lippincott Williams &amp; Wilkins a Wolters Kluwer business. 10<sup>th</sup> Ed. Philadelphia, Baltimore, New York.</p>

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 <u>physiology</u> , <u>pathology</u> and clinical courses.
Learning outcomes	Following successful completion of the course, students will be able to: <ol style="list-style-type: none"> <li>1. list and describe major anatomical structures of the trunk including the viscera of domestic mammals</li> <li>2. explain the development of the viscera</li> <li>3. apply anatomical nomenclature</li> <li>4. skilled communicate anatomical information</li> <li>5. utilize dissection skills</li> </ol>

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:



Asocc. Prof. Martina Đuras

Head of Department/Clinic:



Asocc. Prof. Martina Đuras

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