

UNIVERSITY OF ZAGREB  
 FACULTY OF VETERINARY MEDICINE  
 Heintelova 55  
 Tel. 01/2390 281  
 Division: Veterinary public health and food safety  
 Department / Clinic: Department of poultry diseases with clinic  
 Email: gottstei@vef.unizg.hr  
 Register no.:  
 File no.: 61-18-023-117  
 Zagreb, September 11<sup>th</sup> 2023



170743	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	14.09.2023	
Klasifikacijska oznaka	Org. jed.	
605-03/23-04/28	251-61-32;	
Uredbeni broj	Prilozi	Vrijednost
251-61-18/320-23-37	0	-

## COURSE SYLLABUS

Course name: Poultry diseases

Academic year 2023-24

Course leader: assoc. prof. Željko Gottstein

Teachers: assoc. prof. Željko Gottstein, assoc. prof. Danijela Horvatek Tomić, assist. Prof Maja Lukač

Associate teachers: Liča Lozica, PhD,DVM, Emanuel Budicin, DVM

First day of classes: October 2<sup>nd</sup> 2023

Last day of classes: December 15<sup>th</sup> 2023

### Activities - Poultry Diseases (1/3)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
02/10/2023	13:30	15:00	p01 Poultry production in the world, preventive measures	11E-1, 11E-2		1:30	Gottstein, Ž.	
05/10/2023	8:15	9:45	p02 Infectious bursal disease, Chicken infectious anemia	11E-1, 11E-2		1:30	Gottstein, Ž.	
05/10/2023	15:00	16:30	v01 Biosecurity	11E-1, 11E-2		1:30	Nastavnici na predmetu S_patologija	
10/10/2023	12:00	13:30	p03 Neoplastic diseases	11E-1, 11E-2		1:30	Gottstein, Ž.	
11/10/2023	14:00	15:30	s01 Poultry immune system	11E-1, 11E-2		1:30	Nastavnici na predmetu	
12/10/2023	14:00	15:30	s02 Pathogenesis of respiratory diseases	11E-1, 11E-2		1:30	Nastavnici na predmetu	
16/10/2023	12:00	13:30	s03 Other viral diseases and viral diseases of waterfowl	11E-1, 11E-2		1:30	Nastavnici na predmetu	
17/10/2023	8:30	10:00	p04 Newcastle disease and other paramyxovirus diseases	11E-1, 11E-2		1:30	Gottstein, Ž.	
18/10/2023	12:00	13:30	s04 Mycoplasma and other bacterial diseases of respiratory system	11E-1, 11E-2		1:30	Nastavnici na predmetu	
19/10/2023	10:00	11:30	p05 Avian influenza, Avian Metapneumovirus infection	11E-1, 11E-2		1:30	Gottstein, Ž.	
23/10/2023	13:30	15:00	s05 Other bacterial diseases	11E-1, 11E-2		1:30	Nastavnici na predmetu	
24/10/2023	12:00	13:30	p06 Infectious bronchitis, Infectious laryngotracheitis, Fowlpox	11E-1, 11E-2		1:30	Gottstein, Ž.	

### Activities - Poultry Diseases (2/3)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
25/10/2023	14:00	15:30	v02 Introduction to poultry necropsy 1	11E-1, 11E-2		1:30	Nastavnici na predmetu S_patologija	
27/10/2023	14:00	15:30	s06 Fungal diseases and Mycotoxicoeses	11E-1, 11E-2		1:30	Nastavnici na predmetu	
30/10/2023	8:15	9:45	s07 Parasitic diseases	11E-1, 11E-2		1:30	Nastavnici na predmetu	
30/10/2023	12:00	13:30	p07 Avian encephalomyelitis, Adenovirus infections	11E-1, 11E-2		1:30	Gottstein, Ž.	
06/11/2023	12:00	13:30	s08 Field cases	11E-1, 11E-2		1:30	Nastavnici na predmetu	
07/11/2023	8:15	9:45	p08 Salmonella and other enterobacterial infections	11E-1, 11E-2		1:30	Lukac, M.	
07/11/2023	10:00	11:30	s09 Field cases	11E-1, 11E-2		1:30	Nastavnici na predmetu	
07/11/2023	13:30	15:00	v03 Poultry necropsy 2	11E-1, 11E-2		1:30	Nastavnici na predmetu S_patologija	
08/11/2023	11:40	13:55	v04 Virology lab	11E-1, 11E-2		2:15	Nastavnici na predmetu V_mikrobiologija	
09/11/2023	10:00	11:30	p09 Bacterial zoonoses	11E-1, 11E-2		1:30	Horvatek, D.	
13/11/2023	13:30	15:00	s10 Field cases	11E-1, 11E-2		1:30	Nastavnici na predmetu	
15/11/2023	13:45	15:15	v05 Molecular lab	11E-1, 11E-2		1:30	Nastavnici na predmetu R_stocarstvo velika	
17/11/2023	14:00	15:30	p10 Pasteurella and related diseases	11E-1, 11E-2		1:30	Horvatek, D.	



### Activities - Poultry Diseases (3/3)

Start Date ?	Start Ti	End Ti	Subject	Group	Note	Length	Instructor	Room
20/11/2023	13:15	14:00	v06 Poultry necropsy 3	11E-1, 11E-2		0:45	Nastavnici na predmetu S_patologija	
22/11/2023	11:30	13:00	v07 Bacteriology lab	11E-1, 11E-2		1:30	Nastavnici na predmetu V_parazitologija	
23/11/2023	10:00	11:30	p11 Metabolic diseases ricardium syndrome	11E-1		1:30	Horvatek, D.	
27/11/2023	11:30	12:15	v08 Poultry necropsy 4	11E-1, 11E-2		0:45	Nastavnici na predmetu S_patologija	
28/11/2023	10:00	12:15	p12 Fungal and parasitic diseases	11E-1, 11E-2		2:15	Horvatek, D.	
30/11/2023	14:00	14:45	v09 Poultry necropsy 5	11E-1, 11E-2		0:45	Nastavnici na predmetu S_patologija	
01/12/2023	14:30	16:00	v10 Examination of hatch debris	11E-1, 11E-2		1:30	Nastavnici na predmetu S_patologija	
04/12/2023	11:00	13:15	v11 Vaccination techniques and blood sampling	11E-1, 11E-2		2:15	Nastavnici na predmetu V_perad	
05/12/2023	8:00	14:00	t01 Field trip - hatchery	11E-1, 11E-2		6:00	Nastavnici na predmetu	
06/12/2023	8:00	14:00	t02 Field trip - Broiler farm	11E-1, 11E-2		6:00	Nastavnici na predmetu	
15/12/2023	8:00	14:00	t03 Field trip - Layer farm	11E-1, 11E-2		6:00	Nastavnici na predmetu	
<b>Total: 36</b>						<b>67:30</b>		

STUDENT OBLIGATIONS

Lecture attendance	During the course student can get maximum 6 points for 25 hours of lectures, minimum 3 points for 13 hours of lectures (0,24 points per hour)
Seminars attendance	During the course student can get maximum 6 points for 20 hours (0,3 points per hour) of seminars, and minimum 4 points for 16 hours of seminars as 20% of absence is maximum.
Practicals attendance	During the course student participate in 30 hours of practicals and for that can get maximum 6 points for 30 hours (0,2 points per hour), and minimum 4 points for 24 hours of practicals as 20% of absence is maximum.
Active participation in seminars and practicals	For activity on seminars and exercises student can get max. 10 points and min. 5 points. Activity on seminars is obligatory and is graded according to successfully prepared and held seminar and for positively oriented answers with min. 3 points and max. 6 points (for positive answers on 5 written questions 0,1 points can be given, and for 5 answers it is total 0,5 points per seminar, with minimum of 3 positive answers during 8 seminars. Students without positive answers give oral answers to two questions). For given seminar presentation minimum 0,5 and maximum 1 point. Student must collect 2,5 points for written questions and 0,5 points for given seminar. For activity on exercises (successfully performed practical part) student can get max 2 points (on 15 practicals can get 0,133 points), and minimum 1 point (on 10 practicals 0,1 point). Also for positive answers can get max 2 points (on 15 practicals can get 0,133 points per answers), and minimum 1 point (on 10 practicals 0,1 point).
Final exam	Oral exam gives 24 to 40 points. Student answers 10 questions, and for 1 question can get 4 points. Student can apply for the final exam with min 36 points: minimum 16 points from attendance and activity on seminars and exercises, and 20 points from continuous assessment (colloquium). Final grade is defined quantitatively, with numeric point scale and a grade corresponding to that scale, from 1 to 5. With grade 1 (one) student is graded if she/he didn't pass the course, i.e. he failed on the exam. For each student its attendance and activity is registered in its personal form, together with its success on the colloquium, what teacher uses to form final grade.
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. <b>Article 41:</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)	20.12.2023. Continuous assessment brings min. 20 and max. 32 points during colloquium, in which for 10 questions student can get min. 20 and max. 32 points (1 positive answer is 3,2 points)
Final exams (dates)	15.11.2023., 15.12.2023., 8.2.2024., 15.2.2024., 22.2.2024.
Form of final exam	Oral

**LITERATURE**

Obligatory literature	<ol style="list-style-type: none"> <li>1. Swayne, D. E. et al. (2020): Diseases of poultry. 14th ed., Wiley-Blackwell, USA.</li> <li>2. Boulianne, M.L. et al. (2013): Avian Disease Manual. AAAP, SAD.</li> <li>3. Brugère-Picoux J., J.P. Vaillancourt, M. Bouzouaia, D. Venne, H.L. Shivaprasad (2015): Manual of Poultry Diseases. AFAS, Paris, France.</li> </ol>
Optional literature	<ol style="list-style-type: none"> <li>1. Abdul-Aziz, T., H.J. Barnes (2018.): Gross Pathology of Avian Diseases: Text and Atlas. AAAP, SAD.</li> <li>2. Abdul-Aziz, T., O.J. Fletcher, H.J. Barnes (2016.): Avian Histopathology. AAAP, SAD.</li> <li>3. Dinev, I. (2014): CEVA Handbook of Poultry Diseases vol. 1. CEVA, France.</li> <li>4. Dinev, I. (2014): CEVA Handbook of Poultry Diseases vol. 2. CEVA, France.</li> <li>5. Dinev, I. (2010): Diseases of Poultry a Colour Atlas, 2nd ed., CEVA, France.</li> <li>6. Selected papers and internet materials.</li> </ol>

**OBJECTIVES AND LEARNING OUTCOMES**

Course objectives	The aim of the course is to acquire knowledge on occurrence and spreading, clinical detection, pathological changes, diagnostics and treatment of diseases as well as preventive procedures needed for field work.
Learning outcomes	<ul style="list-style-type: none"> <li>- Recognize poultry diseases of infectious and noninfectious ethiology</li> <li>- Knowing basics of technology principals and poultry health protection be able to independently organize health control on poultry holdings in defined area</li> <li>- independently estimate serology and other diagnostic procedure results and recommend and apply</li> </ul>

immunoprotection measures

- Independently apply basic principles of treatment and other procedures with aim to protect and control specific diseases, especially zoonosis.
- Perform necropsy and select appropriate samples for further diagnostic procedures.


### 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:

  
Assoc. prof. Željko Gottstein

Head of Department/Clinic:

  
Assoc. prof. Željko Gottstein

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 25 hours  (XI semester)	<b>3</b>  3/0,24 = 13 hours of lecture	<b>6</b>  6/25 = 0,24 (coefficient for 1 hour of lecture attendance)
Seminar attendance 20 hours  (XI semester)	<b>4</b>  <b>maximum 30% absence (7 hours)</b> 13 hours of seminars obligatory	<b>6</b>  6/20 = 0,3 (coefficient for 1 hour of seminar attendance)
Practicals attendance 30 hours  (XI semester)	<b>4</b>  <b>maximum 30% absence (10 hours)</b> 20 hours of practicals obligatory	<b>6</b>  6/30 = 0,2 (coefficient for 1 hour of exercise attendance)
Active participation in seminars and practicals (10 points) <sup>1</sup>	<b>5</b>  Minimum 3 points on seminars (0,5 for seminar + 2,5 for answers on exit colloquium during 8 seminars (8x0,3))  +	<b>10</b>  Maximum 6 points on seminars (1 point for seminar + 5 points for answers on exit colloquium during 10 seminars (10x0,5))  +
Continuous knowledge checking (mid-terms)  (32 points) <sup>2</sup>	<b>20</b>  Minimum 2 points on exercises (1 point for for activity (10x0,1) and 1 point for answers (10x0,1))	<b>32</b>  Maximum 4 points on exercises (2 points for successfully finished practicals (15x0,133) and 2 points for answers (15x0,133))
Final exam  (40 points) <sup>3</sup>	<b>24</b>  Minimum 6,25 answers x 3,2 points  24/1 = 24	<b>40</b>  Maximum 10 answers x 3,2 points  40/40 = 1



	(coefficient 1)	(coefficient 1)
TOTAL	60	100