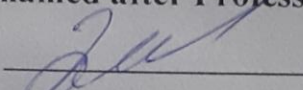


MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
SUMY NATIONAL AGRICULTURAL UNIVERSITY  
Department of Virology, Pathoanatomy and Bird Diseases named  
after Professor Panikar

APPROVED

Head of the Department of Virology,  
Pathoanatomy and Bird Diseases  
named after Professor Panikar I.

  
Zon G.

" 22 " 20 2020

WORK PROGRAM

(SILABUS)

PP. 64 Autopsy, pathological diagnosis of animal diseases and basics of  
forensic veterinary medicine

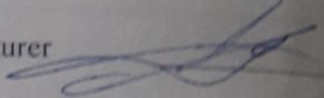
Specialty: 211 - Veterinary medicine

Educational program: OPP "Veterinary Medicine"

Faculty: Veterinary Medicine

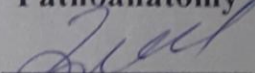
2020 - 2021 academic year

Work program on the subject "Dissection and pathological diagnosis of animal diseases and the basics of forensic veterinary medicine" for students in the direction of training 211 - **Veterinary Medicine**.

**Developer:** Panasenko O., associate professor, senior lecturer 

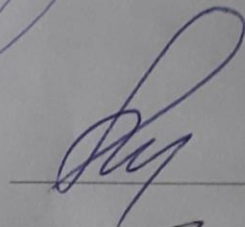
The working program was considered at the meeting of the department of Virology, Pathoanatomy and Bird Diseases named after Professor Panikar I.

Protocol of « 22 » June 2020 № 12

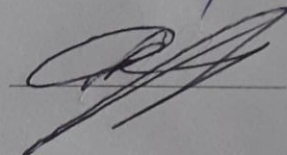
**Head of the Department of Virology, Pathoanatomy and Bird Diseases named after Professor Panikar I.**  **Zon G.**

**Agreed:**

Guarantor of the educational program

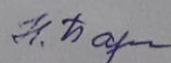
 L. Ulko

Dean of the Faculty Vet. Medicine

 Nechiporenko O.

Methodist of the Department of Education Quality

licensing and accreditation

 N. Baranik

Registered in the electronic database: date 09.07. 2020.

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## 1. Description of the discipline

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the discipline
		full-time education
Number of loans -3	Field of knowledge: 21 Veterinary medicine	Normative
Modules - 2 Content modules - 3	Specialty: 211 Veterinary medicine	Year of preparation: 2020-2021
		Course 4
		Semester
The total number of hours is 90		8th
		Lectures:
		-
		Laboratory
		20
		Independent work
		70
Weekly hours for full-time study 2nd semester: classroom -1 independent work of the student - 2	Educational degree: master	Type of control: test

**Note:** the ratio of the number of hours of classroom classes to independent and individual work is (%):

for full-time education - 20/70% (1 / 3,5).

## **2. The purpose and objectives of the discipline**

**Purpose:** the formation of a system of special knowledge on the sequence of pathological examination of the corpses of different species of animals in order to clarify the lifelong diagnosis, the establishment of morphological changes in the organs and causes of death.

**Task:** to master the methods of dissecting the corpses of different animals using special equipment and to master the methods of personal safety in the section of corpses, as well as the disposal of corpse remains and remediation of equipment and tools.

**As a result of studying the discipline the student must:**

**know:**

- features of section work at autopsy of corpses of different animals;
- methods of personal protection when working with corpse material;
- methods of disposal of corpse remains;
- the sequence of use of disinfection measures for the reliable remediation of equipment and tools that have been in contact with the cadaveric material.
- methods of forensic veterinary examination are aimed at ensuring the norms of state legality in resolving special issues by bodies of inquiry, investigation, court.
- forensic thanatology, features of forensic veterinary autopsy of different species of animals, the order of documentation.
- basics of forensic traumatology, toxicology, obstetrics.

- basics of forensic examination on the material of cases, forensic examination of food products of animal origin; resolution of disputes in the purchase and sale of animals and the basics of forensic deontology.

**be able:**

- to dissect the corpses of animals of different species;
- to establish the pathological diagnosis and the cause of death;
- draw up documentation of pathological autopsy;
- to select pathological material for special researches;
- rehabilitate equipment and tools after autopsy and dispose of corpse remains.

### **3. The program of the discipline**

Developed according to the program of the Ministry of Agrarian Policy and Food of Ukraine for the course "Pat. anatomy and dissection "EQL" Bachelor ", approved by the scientific and methodological commission of scientific and pedagogical staff of higher educational institutions from September 15, 2011, protocol №2.

#### **Module 1. Theoretical and practical bases of autopsy of animal corpses.**

*Content module 1. The value of postmortem pathological diagnosis in the fight against animal diseases.*

**Topic 1. Diagnostic and forensic veterinary autopsy. Safety at autopsy. Learn the basics of diagnostic and forensic autopsy.** Get acquainted with safety precautions when dissecting corpses. Significance of pathological autopsy of animal carcasses. List of diseases for which autopsy is prohibited. The importance of postmortem pathological diagnosis in the fight against animal diseases.

**Topic 2. Pathological changes in the organs of animals in diseases of various etiologies.** Assimilate pathological changes in the organs of animals in diseases of various etiologies. Appointment of pathological tools during section work. Methods of providing personal protection when working with corpse material (overalls, masks, goggles, etc.). Personal hygiene and safety when dissecting animal carcasses. Methods of utilization and disposal of corpse material.



**Topic 3. Rules of selection of pathological material.** Master the rules of selection of pathological material for special studies. Fundamentals of museum work in veterinary medicine. The procedure for selecting the material for the manufacture of wet micropreparations. The procedure for the manufacture of dry macropreparations.

**Module 2. Sectional technique and pathological work.**

*Content module 2. Forensic thanatology. Organization and carrying out of autopsy of different species of animals.*

**Topic 4. Organization of autopsy, veterinary and sanitary requirements for the place of autopsy.** Get acquainted with the process of organization autopsy of corpses and veterinary and sanitary requirements for the place of autopsy. The order and sequence of pathological examination of animal carcasses. General examination of the corpse and cognitive features of the animal. The order of pathological examination of the internal organs of the animal carcass. Features of pathological examination of various organs.

**Topic 5. Technique and features of pathological autopsy of corpses of different species of animals.** Master the technique and features autopsy of corpses of different species of animals.

**Topic 6. Compilation of pathological documentation.** Learn to compile pathological documentation.

**4. The structure of the discipline**

Names of content modules and themes	Number of hours			
	Total	l	Lab	c.p.
1	2	3	4	5
<b>Spring semester</b>				
<b>Module 1. Theoretical and practical bases of autopsy of animal corpses.</b>				
<b>Semantic module 1. The value of the post mortem pat of anatomical diagnostics in the struggle against animal diseases.</b>				
<b>Theme 1.</b> Diagnosis and forensic examination of animal corpses. Safety in the autopsy.	10	-	4	6
<b>Theme 2.</b> Pathoanatomical changes in animal organs in diseases of different etiology.	10	-	4	6

<b>Theme 3.</b> Rules of selection of pathoanatomical material.	10	-	4	6
<b>Total content module 1.</b>	<b>30</b>	<b>-</b>	<b>12</b>	<b>18</b>
<b>Module 2. Section engineering and pathological anatomical work and bases of judicial veterinary science</b>				
<b>Semantic module 2. Organizing and conducting autopsies of corpses of different species of animals.</b>				
<b>Theme 4.</b> Organization autopsy, veterinary and sanitary requirements to the site of autopsy.	6	-	2	4
<b>Theme 5.</b> Technique and features of atomic anatomical autopsy of corpses of different kinds of animals.	6	-	2	4
<b>Theme 6.</b> Drafting patanatomical documentation.	6	-	2	4
<b>Theme 7 .</b> The notion of pathologic anatomy diagnosis. Special pathomorphology .	6	-	2	4
<b>Theme 8.</b> Differential pathoanatomical diagnostics of animal diseases.	6	-	2	4
<b>Total content module 2 .</b>	<b>30</b>	<b>-</b>	<b>10</b>	<b>20</b>
<b>Content module 3 . Fundamentals of Forensic Veterinary Expertise</b>				
<b>Theme 9.</b> Fundamentals of Forensic Veterinary Examination of Poisoning and Animal Toxicosis.	6	-	2	4
<b>Theme 10 .</b> Fundamentals of forensic veterinary traumatology.	6	-	2	4
<b>Theme 11 .</b> Expertise in the disease and death of animals as a result of violation of the conditions of feeding, maintenance and exploitation.	6	-	2	4
<b>Theme 12 .</b> Forensic examination of food products of animal origin.	6	2	2	4
<b>Theme 13 .</b> Forensic aspects of clinical practice.	6		2	4
<b>Total content module 3 .</b>	<b>30</b>	<b>-</b>	<b>10</b>	<b>20</b>

### 5. Topics of laboratory lessons

No.	Title of topic	Number of hours
-----	----------------	-----------------

w / o		
1	To master the basics of diagnostic and forensic autopsy of animal corpses. Take a look at the safety features of the corpses.	2
2	Assimilate pathoanatomical changes in animal organs in diseases of different etiology.	2
3	To control the rules for the selection of pathoanatomical material for special investigations.	2
4	To get acquainted with the process of the organization of the autopsy of corpses and the veterinary and sanitary requirements for the place conducting the separation.	2
5	To learn Yeghnik tons of features and autopsy different species of animals. Learn to compile pathological anatomical documentation.	2
6	Detection of methods of differential pathoanatomical diagnostics of bacteriosis of animals with acute flow. Detection of methods of differential pathoanatomical diagnostics of bacteriosis of animals with chronic course.	2
7	Study of objects and methods of investigation of forensic veterinary expertise in poisoning of animals	2
8	Studying of objects and methods of investigation of forensic veterinary expertise at toxicosis and toxicoinfection of animals.	2
9	Criteria for evaluation in the examination for animal damage	2
10	Assimilation of criteria of differential pathoanatomical diagnosis of bacteriosis of dogs and fur animals.	2
	<b>Together</b>	<b>20</b>

## 6. Independent work

No. w / o	Title of topic	Number of hours
1	<b>Theme 1:</b> • with a plot of pathoanatomical autopsies of animal	4



	<p>corpses ;</p> <ul style="list-style-type: none"> <li>• Mr erealik diseases for I cal prohibited section;</li> <li>• with the guise of a posthumous patologoanatomical diagnosis in the struggle with animal diseases .</li> </ul>	4 4
2	<p><b>Theme 2 :</b></p> <ul style="list-style-type: none"> <li>• appointment of pathoanatomical tools during sectional work;</li> <li>• methods of providing personal protection when working with corpses material (overalls, masks, glasses, etc.);</li> <li>• personal hygiene and safety equipment at autopsy of animal corpses;</li> <li>• methods of utilization and disposal of corpses.</li> </ul>	4 4 4 4
3	<p><b>Theme 3 :</b></p> <ul style="list-style-type: none"> <li>• n order and sequence of pathoanatomical study of animal corpses ;</li> <li>• with an abdominal examination of the corpse and cognitive signs of the animal ;</li> <li>• n order of pathoanatomical study of internal organs of a corpses of animals;</li> <li>• Peculiarities of pathoanatomical examination of various organs.</li> </ul>	6 6 6 6
4	<p><b>Theme 4 :</b></p> <ul style="list-style-type: none"> <li>• about the dream of the museum business in veterinary medicine;</li> <li>• the order of selection of patmaterial for the production of wet micropreparations;</li> <li>• the procedure for making dry macro products .</li> </ul>	6 6 6
	<b>Together</b>	<b>70</b>

## 7. Teaching methods

### 1. Methods of training on the source of knowledge :

1.1. **Reference** : explanation, instruction in laboratory lessons and consultations, work with textbooks, manuals, NMC (summarizing).

1.2. **Visual**: A demonstrative method is used in the demonstration of corpses, in the manufacture of museum preparations; illustrations - slide shows according to the plan of classes, tables.

1.3. **Practical:** implementation of practical sectional work (individually) at the autopsy of animal corpses and the manufacture of museum preparations.

## **2. Methods of training on the nature of the logic of knowledge :**

2.1. **Analytical** -analysis subjected to all changes found in the organs of the section to identify the essential features characteristic of a particular pathology

2.2. **Methods of synthesis** - the establishment of certain pathologies of organs and systems to determine the main cause of death of the animal.

2.3. **Inductive method** - is used in determining the possible influence of the defeat of individual organs on the pathogenesis of the underlying disease.

2.4. **Deductive method** - used in generalizing all pathoanatomical changes to form the main conclusion about the cause of death;

2.5. **Traductive method** - used in complex cases in sectional work, when the general signs of the pathological process are revealed, make a general preliminary conclusion (suspicion) in the disease that could lead to the death of the animal.

3. Methods of training on the nature and level of independent mental activity of students .

3.1. **Problem** - before the student poses a problem (a specific disease, or several diseases, grouping into a group of certain basic characteristics, which requires careful comprehensive study with the protection of evidence base.

3.2. **Part-search method** (heuristic) - based on the materials outlined in the scientific and methodological complexes, the student develops a certain topic, using the materials of the textbook, manuals, internet resource , etc.

3.3. **The research method** - takes place at a thorough evaluation of the affected organs in several similar bodies of corpses and comparable to their anatomical structure, the determination of the relative mass of the organs under study, and so on.

3.4. **Reproductive method** - used as the acquisition of practical skills in sectional work based on the assimilation of the theoretical foundations of pathoanatomical diagnostics.

**3.5.Poyasnyuvalno-demonst ratyvnyy method** - used in the first class in the form of model animals postmortem autopsy explaining all the possible changes that have occurred during the life of the body of the animal is killed.

4. Active teaching methods: assessment of problem situations, sectional work in production conditions (farms, utilization, etc.), excursions to the laboratory of pathomorphology , use of educational and control tests.

5.Interaktyvni learning technologies: the use of multimedia technology, the method of analysis of specific situations (case - study).

## **9. Control methods**

1. Rating control over the 100-point ECTS evaluation system.

2. Provision of interim control during the semester (intermediate certification).

3. Policyterial evaluation of students' current work:

- level of knowledge demonstrated in practical classes;

- express control during classes;
- independent study of the topic as a whole or individual issues;
- writing abstracts;
- test results.

4. Direct calculation in the final assessment of the student's performance of a particular individual task:

- Coursework.

### 9. Distribution of points received by students

The form of control is a check

Current testing and independent work						Independent work (CPC)	Together for modules and CPCs	Attestation	Sum
Module 1 35 points			Module 2 35 points						
Content module 1			Content module 2						
T1	T2	T3	T4	T5	T6				
10	10	15	10	10	15	15	85 (70 + 15)	15	100

### Realization of the course project (work)

(the table remains with the condition that this kind of work is evaluated according to the ECTS)

Explanatory note	Illustrative part	Work protection	Sum
upto 20	upto 20	upto 60	100

### Scale: National and ECTS

The amount of	Assessment	Score on a national scale
---------------	------------	---------------------------

<b>points for all types of educational activities</b>	<b>of ECTS</b>	<b>for exam, course project (work), practice</b>	<b>To set off</b>
90-100	<b>A</b>	perfectly	credited
82-89	<b>B</b>	okay	
74-81	<b>C</b>		
64-73	<b>D</b>	satisfactorily	
60-63	<b>E</b>		
35-59	<b>FX</b>	unsatisfactory with the possibility of re-assembly	Not included with the possibility of re-assembly
0-34	<b>F</b>	unsatisfactorily with compulsory repeated study of discipline	not enrolled with compulsory repeated study of discipline

## **10. Methodical support**

1. NMC in discipline "Dissection and pathoanatomical diagnostics of animal diseases. / Zona GA - Sumy, 2012 (site SNAU)
2. Methodical instructions on independent work of students from the autopsy. - Sumy, SNAU, 2013.
3. Methodical instructions for conducting training on pathanatomy. / G. A. Zon, L. B. Ivanovskaya. - Sumy, 2010.

## **11. Recommended literature**

### **Basic**

1. Pathological anatomy of animals: a manual / [Urbanovich P.P., Potockiy M.K., Gevkan II, Zon G.A. and others.]; edited by PP Urbanovich and MKPototsky. - K.:Vetinform, 2008. - 879 p.
2. GA Zone Differential pathoanatomical diagnostics of infectious animal diseases / G.A. Zone, L. B. Ivanovskaya. - Sumy, 2011. - 215 p.
3. GA Zone Pathological anatomy of parasitic animal diseases / G.A. Zone - With the mind: "Source", 2005 - 252 p.
4. Zabelo E.M. Pathological anatomy of infectious diseases of the animal / E.M. Zabiela. - K: Agrarian Science, 1997. - 246 p.

5. GA Zone Pathogeanatomy of corpses of animals : educational guide / G.A. Zone, M.V. Skrypka, L. B. Ivanovo. - - the second edition, supplemented - Sumy; GDP "Mriya-1" LTD. - 2012 - 244p.
6. GA Zone Forensic Veterinary Examination : Training Manual / G.A. Zone - Sum : GDP "Mriya-1", 2002. - 258 p.

### **Auxiliary**

1. Borisevich BV Manual of pathological and anatomical terms /B.V. Borisevich , MV Skrypka, VV Forest - Poltava, 2005. - 124 p.
2. Kokurichev P.I. Patanatomyya selskohozyaystvennyh animals: Album / P.Y.Kokurychev, B.T.Domnyn, M.P.Kokurycheva. - Spb .: Agropromizdat , 1994. - 212 p.
3. Kriuvatenko A.I. Directory of pathoanatomical diagnostics of diseases of farm animals / AI Kryutenko , MS Zhakov, P.P. Urbanovich; ed. A.Y.Kryvutenko. - K.: Harvest, 1983. - 168 p.
4. Pathogeanatomical diagnostics of bird diseases / AVAkulov, V.M.Apatenko , BF Besarabov , Yu.A.Velikovskaya and others; p and q Ed. VP Shishkova - M .: Kolos, 1978. - 440 p.
5. Pathogeanatomical diagnostics of pig diseases / AA Aurrov, AVAkulov, L.B.Burba ,MSZhakov and others ; ed. VP Shishkova. - M .: Kolos, 1984. - 335 p.
6. Pathologic diagnostics of cattle diseases. / A.V.Akulov, V.M. Apatenko , N.I. Archipov, R.A.Buzmakov and others; ed. VP Shishkova. - Moscow: Agropromizdat , 1987. - 399 p.