



MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
STATE BIOTECHNOLOGICAL UNIVERSITY
Faculty of Veterinary Medicine

" APPROVED by"
Head of the Department of
Normal and Pathological Morphology


_____(Byrka O.V.)
(signature)

"25" June 2025

Department of Normal and Pathological Morphology

**WORK PROGRAM
OF THE EDUCATIONAL DISCIPLINE
SC «RABBIT ANATOMY»**

Level of Higher Education	<u>The second level of higher education (master's)</u> (title)
Field of Study	<u>21 Veterinary Medicine</u> (code and title)
Specialty	<u>211 Veterinary Medicine</u> (code and title)
Educational Program	<u>educational and professional program "Veterinary Medicine"</u> (title)

Compilers: candidate of veterinary sciences, senior lecturer Fesenko I.A.,
 : candidate of veterinary sciences, associate professor Byrka O.V.
 (academic rank, position, surname and initials)

The working program of the educational discipline was approved at the extended meeting of the department of Normal and Pathological Morphology.

Protocol dated: "25" June 2025 No.10.

Approved by:

Program guarantor _____ Veterinary Medicine _____
 (name of the program)

"25" June 2025 (_____) Naumenko S.V.
 (signature) (name)

Extended validity period until:

" ____ " ____ 20 ____ . Protocol від № ____ of " ____ " ____ 20 ____ .
 Head of the Department _____ (_____)
 name of the Department (signature) (surname, name)

" ____ " ____ 20 ____ . Protocol від № ____ of " ____ " ____ 20 ____ .
 Head of the Department _____ (_____)
 name of the Department (signature) (surname, name)

" ____ " ____ 20 ____ . Protocol від № ____ of " ____ " ____ 20 ____ .
 Head of the Department _____ (_____)
 name of the Department (signature) (surname, name)

1. Description of the discipline

Name of indicators	Characteristics of the academic discipline
	Full-time study
Number of credits - 3	Discipline status:
	<i>selective</i>
Number of Part - 3	Year of preparation:
	3-й
	Semester
Total Hours - 90	5-й
	Lecture
	12 hours
	Practical
	18 hours
	Self-study
	60 hours
Weekly hours for full-time education: classrooms – 12; Independent work of the applicant – 18.	Type of control:
	credit (differentiated)

2. Purpose and tasks of the discipline

The purpose of the discipline "Rabbit Anatomy" is to provide applicants with thorough knowledge about the regularities of the structure of the body, as well as the study of the form and structure of organs and organ systems of the whole organism of animals in close relationship with the conditions of existence, with the functions of the organs they perform, under the influence of the external environment and hereditary factors.

The task of studying the disciplin: 1). The general educational tasks of the discipline are the formation of medical thinking, professional skills and professional worldview of the future master. The study of this discipline will reveal interdisciplinary connections, contribute to the structuring of acquired knowledge, and stimulate the desire for continuous self-improvement; 2). The applied tasks of the discipline are aimed at studying anatomy in three main aspects of the formation of an organism: in adulthood, in the process of individual development (ontogenesis), in the process of historical development of individual species and even classes of animals (phylogeny). In accordance with the practical tasks facing anatomy, it is divided into systemic, functional, topographic, comparative, plastic, breed (exterior).

The student will learn to characterize not only the structural features of a particular organ, but also its morpho-functional relationship with various body systems.

The subject of study of the discipline is the structure of the body of a rabbit, the division of its constituent parts into systems and apparatuses according to their functional connection; the mutual placement of parts of the body and organs (syntopy); the projection of individual organs onto the skeleton (skeletonotopy); general principles of the structure and development of individual organs and systems in the process of their historical or individual formation; features of the structure of individual organs and systems depending on the function, which they perform, and their specific structural features in a domestic rabbit.

The basic disciplines for the successful assimilation of the program material of the discipline are (from the structural and logical scheme of the educational program for elective disciplines) the disciplines of anatomy of domestic animals, histology, physiology, biochemistry.

3. Program of the academic discipline

Chapter 1: Somatic group systems.

General anatomy. Introduction to anatomy. Basic morphological concepts. General osteology. Characteristics of the skeleton. Axial skeleton. Morpho-functional characteristics of the limbs. Skeleton of the limbs. Arthrology. General myology. Special myology. Dermatology. Glandular skin derivatives. derivatives of the skin. Features of the structure of somatic organs in a rabbit.

Topic 1. General anatomy. Introduction to anatomy. Basic morphological concepts. The main patterns of the structure of the rabbit skeleton. General osteology. Characteristics of the rabbit skeleton. Axial skeleton of the rabbit. Thoracic vertebrae. Visceral bones. Chest. Cervical spine. Lumbar, sacral and caudal spine. Skull, its division into sections. Peripheral skeleton of a rabbit Arthrology. Features of the connection of bones in a rabbit.

Summary of the topic 1. The concept of anatomy as a science, its place among biological disciplines. The purpose and objectives of the anatomy course. The importance of rabbit anatomy for expanding medicinal thinking. Objects and methods of studying rabbit anatomy. Planes and directions in the animal's body. Basic principles of the structure of the animal's body. Basic morphological concepts. Characteristics of the apparatus of movement. Characteristics and role of the skeleton in the apparatus of movement and in the body. Division of the skeleton into sections. The structure of bone as an organ. Development and factors of bone formation. Manifestation of basic principles in the structure of the skeleton. Phenomena of reduction in the skeleton. Age characteristics of bones. Quantitative characteristics of the skeleton of a rabbit. General characteristics of the spine. Full bone segment, reduction of its elements in different parts of the spine. The structure of the vertebrae. Ribs, sternum. Chest. Features of the structure of the rabbit skull. Features of the structure of the skeleton of the limbs in a rabbit. Connection of bones in segments in a rabbit. Connecting segments to each other. Connection of the bones of the thoracic limb with the bones of the axial skeleton. Joints of the thoracic limb. Connection of the bones of the pelvic limb with the bones of the axial skeleton. Joints of the pelvic limb

Recommended Reading (1,2,5,6)

Topic 2. General myology. The role of the muscular system in the body and in the apparatus of voluntary movement. Physical properties and chemical composition of rabbit muscles. Auxiliary organs of the muscular system. Fascia of the trunk. Main topographic and functional groups of rabbit muscles. Special myology. Dermatology. Glandular and derivatives of rabbit skin.

Summary of topic 2. The role of the muscular system in the body and in the apparatus of voluntary movement. Physical properties and chemical composition of rabbit muscles as a source of protein in human food. Anatomical and functional connection of muscles with bones. Muscle classification. General characteristics of topographic and functional muscle groups. Fascia and other auxiliary organs of the muscular system in rabbits. Points of attachment and function of the main muscle groups in a rabbit. The role of the skin in the body and its economic importance. Skin structure. Characteristics of skin derivatives. Classification of glands. Morpho-

functional characteristics of the mammary glands of rabbits. Morpho-functional characteristics of skin derivatives: rabbit hair and pulp. Determination of the quality of rabbit fur.

Recommended Reading (1,2,5,6)

Chapter 2: Visceral group of systems.

General splanchnology. Body cavities. Serous formations in body cavities.

Characteristics of the digestive apparatus. Respiratory apparatus. Genitourinary apparatus of the female. Sexual apparatus of the male. Features of the structure of the insides of a rabbit.

Topic 3. General splanchnology. Body cavities. Boundaries of the thoracic and abdominal cavities. Determination of areas in the sections of cavities. Serous formations in body cavities. Rabbit digestion apparatus . Rabbit breathing apparatus. Anatomical and physiological connection of digestive and respiratory apparatus. Features of the rabbit.

Summary of the topic 3. Definition of the concepts of "Viscera" and "Splanchnology". Visceral group of systems. Morpho-functional characteristics of the insides of tubular and compact types of structure. Serous formations in body cavities. Derivative pleura. Peritoneal derivatives. The relationship of internal organs with serous membranes The role of the digestive apparatus in the body. General characteristics of the digestive tube and its differentiation into organs according to function. Division of the digestive tube into sections. Organs of the oral cavity. Anatomical foundations of determining age by changes in teeth. Features of the structure of the cecum and colon in rabbits. Features of the digestive process in a rabbit. The role of the respiratory apparatus in the body. The main morphological features of the breathing tube. Anatomical composition and general patterns of differentiation of the breathing tube into separate organs.

Recommended Reading (1,4,5,6)

Topic 4. The genitourinary apparatus of the female. The genitourinary apparatus of male rabbits. The anatomical and physiological relationship of the urinary and genital apparatus. Features in the rabbit.

Summary of topic 4. General function and role of urinary organs in the body. Anatomical composition of the urinary organs. Morpho-functional characteristics of the kidneys and urinary tract, their species and sex differences. Nephron. Classification of the kidneys. Topography of the urinary organs and urinary tract. Biological significance and role of the reproductive apparatus in the body. Differentiation of the genital apparatus into separate organs according to the distribution of partial functions. Anatomical composition of the female reproduction apparatus. Ovary: structure, topography. Fallopian tube. Classification of queens. Features of the structure of the rabbit's uterus. The anatomical composition of the genital apparatus of the male. Age and species features of the structure and location of the genital organs of males. Features of the structure of the genitals in a rabbit.

Recommended Reading (1,4,5,6)

Chapter 3: Integrated group of systems.

General angiology. Circulatory circles. Heart. Venous highways of the body. Lymphatic system. Organs of hemocytopoiesis and immune defense. System of endocrine glands. General neurology. Spinal cord. Spinal nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the structure of the organs of the integral group in a rabbit.

Topic 5. General angiology. The integrating role of the vascular system. Circulatory circles. Heart. Vessels associated with the aorta. Venous highways of the body. Lymphatic system. Comparative characteristics of liquid tissues. Organs of hemocytopoiesis and immune defense. System of endocrine glands. Features of the circulatory system, hematopoietic system and endocrine glands in a rabbit.

Summary of topic 5. Functions of the vascular system and its division into sections. General characteristics of the circulatory system, its anatomical composition. Circulatory circles. Vessels of the microcirculatory bed. Features of the placental circle of blood circulation. Rabbit heart: structure, conduction system, topography. Vessels associated with the heart. The structure of the core. Venous highways of the body. The formation of cranial and caudal vena cava. Portal vein of a rabbit. Classification of lymph nodes and their structure. Scheme of collector lymphatic vessels in a rabbit. Lymph nodes in a rabbit: their topography, roots, lymphatic outflow. Reticulo-histiocytic system (RGS). Central and peripheral organs of hematopoiesis and immunogenesis in a rabbit. The main regularities of the structure, development and relationship of integral systems with other body systems.

Recommended Reading (1,3,5,6)

Topic 6. General Neurology. Spinal cord. Spinal Nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the nervous system in a rabbit.

Summary of topic 6. Morpho-functional characteristics of the nervous system. General and special functions of the nervous system and the organs that perform them. Division of the nervous system and its anatomical composition. Reflex arc. Spinal cord: morpho-functional characteristics, its connection with the brain and organs. Membranes, intermembrane spaces, vessels of the spinal cord. Formation and branching of spinal nerves, zones of innervation. Development and structure of the brain. Membranes of the brain, submembranes, vessels of the brain. Formation of cranial nerves. Characteristics of cranial nerves. Branching of nerves. Connection of nerves with organs. General characteristics of the autonomic nervous system. Features of the structure of the complex reflex arc. General characteristics of the sympathetic nervous system. Links of the efferent part of the sympathetic innervation of organs. Sympathetic trunks. Sympathetic ganglia. Sympathetic innervation of organs. Head and sacral parts of the parasympathetic nervous system. Vagus nerve. Autonomic nerve plexuses. Morphology of analyzers. Classification of analyzers. Olfactory, gustatory, skin, musculoskeletal and visceral analyzers. Visual, equilibrium, auditory analyzers.

Recommended Reading (1,5,6)

4. Structure of the academic discipline

Name chapters and topics	Number of hours					
	full-time form					
	Total volume	Classroom			Independent work	
		Just	including			
	Lecture		Laboratory	Practical		
1	2	3	4	5	6	7
<u>Chapter 1: Somatic group of systems.</u>						
<u>General anatomy. Introduction to anatomy. Basic morphological concepts. General osteology. Characteristics of the skeleton. Axial skeleton. Morpho-functional characteristics of the limbs. Skeleton of the limbs. Arthrology. General myology. Special myology. Dermatology. Glandular skin derivatives. skin derivatives. Features of the structure of somatic organs in a rabbit.</u>						
Topic 1. <u>General anatomy. Introduction to anatomy. Basic morphological concepts. The main patterns of the structure of the rabbit skeleton. General osteology. Characteristics of the rabbit skeleton. Axial skeleton of the rabbit. Thoracic vertebrae. Visceral bones. Chest. Cervical spine. Lumbar, sacral and caudal spine. Skull, its division into sections. Peripheral skeleton of a rabbit Arthrology. Features of the connection of bones in a rabbit.</u>	14	4	2	-	2	10
Topic 2. <u>General myology. The role of the muscular system in the body and in the apparatus of voluntary movement. Physical properties and chemical composition of rabbit muscles. Auxiliary organs of the muscular system. Fascia of the trunk. Main topographic and functional groups of rabbit muscles. Special myology. Dermatology. Glandular and derivatives of rabbit skin.</u>	14	4	2	-	2	10
Total for Chapter 1	28	8	4	-	4	20
<u>Chapter 2: Visceral group of systems.</u>						
<u>General splanchnology. Body cavities. Serous formations in body cavities. Characteristics of the digestive apparatus. Respiratory apparatus. Genitourinary apparatus of the female. Sexual apparatus of the male. Features of the structure of the insides of a rabbit.</u>						
Topic 3. <u>General splanchnology. Body cavities. Boundaries of the thoracic and abdominal cavities. Determination of areas in the sections of cavities. Serous formations in body cavities. Rabbit digestion apparatus .</u>	14	8	2	-	2	10

<u>Rabbit breathing apparatus. Anatomical and physiological connection of digestive and respiratory apparatus. Features of the rabbit.</u>						
Topic 4. <u>The genitourinary apparatus of the female. The genitourinary apparatus of male rabbits. The anatomical and physiological relationship of the urinary and genital apparatus. Features in the rabbit.</u>	14	6	2	-	4	8
Total for Chapter 2	28	10	4	-	6	18
Chapter 3: Integrated group of systems. <u>General angiology. Circulatory circles. Heart. Venous highways of the body. Lymphatic system. Organs of hemocytopoiesis and immune defense. Endocrine gland system. General neurology. Spinal cord. Spinal nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the structure of the organs of the integral group in a rabbit.</u>						
Topic 5. <u>General angiology. The integrating role of the vascular system. Circulatory circles. Heart. Vessels associated with the aorta. Venous highways of the body. Lymphatic system. Comparative characteristics of liquid tissues. Organs of hemocytopoiesis and immune defense. System of endocrine glands. Features of the circulatory system, hematopoietic system and endocrine glands in a rabbit.</u>	14	6	2	-	4	10
Topic 6. <u>General Neurology. Spinal cord. Spinal Nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the nervous system in a rabbit.</u>	16	6	2	-	4	12
Total for Chapter 3	34	12	4	-	8	22
Total hours	90	30	12	-	18	60

5. Theoretical lesson (Lectures)

№ s/n	Topic name	Hours
		f/f
<u>Chapter 1: Somatic group of systems.</u> <i><u>General anatomy. Introduction to anatomy. Basic morphological concepts. General osteology. Characteristics of the skeleton. Axial skeleton. Morpho-functional characteristics of the limbs. Skeleton of the limbs. Arthrology. General myology. Special myology. Dermatology. Glandular skin derivatives. skin derivatives. Features of the structure of somatic organs in a rabbit.</u></i>		
1.1	Characteristics of the rabbit skeleton. Connection of the bones of the skeleton	2
2.1	Myology. Dermatology.	2
<u>Chapter 2: Visceral group of systems.</u> <i><u>General splanchnology. Body cavities. Serous formations in body cavities. Characteristics</u></i>		

<i>of the digestive apparatus. Respiratory apparatus. Genitourinary apparatus of the female. Sexual apparatus of the male. Features of the structure of the insides of a rabbit.</i>		
3.2	General splanchnology Digestive and respiratory apparatus of the rabbit.	2
4.2	The genitourinary system of a rabbit.	2
Chapter 3: <i>Integrated group of systems.</i> <i>General angiology. Circulatory circles. Heart. Venous highways of the body. Lymphatic system. Organs of hemocytopoiesis and immune defense. Endocrine gland system. General neurology. Spinal cord. Spinal nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the structure of the organs of the integral group in a rabbit.</i>		
5.3	Cardiovascular system. Endocrine glands.	2
6.3	Nervous system and analyzers of the domestic rabbit.	2
	Total	12

6. Practical lesson

№ s/n	The name of the topic of the lesson	Hours
		f/f
<u>Chapter 1: Somatic group of systems.</u> <i>General anatomy. Introduction to anatomy. Basic morphological concepts. General osteology. Characteristics of the skeleton. Axial skeleton. Morpho-functional characteristics of the limbs. Skeleton of the limbs. Arthrology. General myology. Special myology. Dermatology. Glandular skin derivatives. skin derivatives. Features of the structure of somatic organs in a rabbit.</i>		
1.1	Skeleton. Connection of the bones of the skeleton.	2
2.1	Topographic and functional muscle groups of a domestic rabbit. Skin and its derivatives in a domestic rabbit	2
<u>Chapter 2: Visceral group of systems.</u> <i>General splanchnology. Body cavities. Serous formations in body cavities. Characteristics of the digestive apparatus. Respiratory apparatus. Genitourinary apparatus of the female. Sexual apparatus of the male. Features of the structure of the insides of a rabbit.</i>		
3.2	Features of the digestive apparatus in a rabbit	2
4.2	Rabbit breathing apparatus	2
5.2	Rabbit urogenital apparatus Topography of the entrails.	2
<u>Chapter 3: Integrated group of systems.</u> <i>General angiology. Circulatory circles. Heart. Venous highways of the body. Lymphatic system. Organs of hemocytopoiesis and immune defense. Endocrine gland system. General neurology. Spinal cord. Spinal nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the structure of the organs of the integral group in a rabbit.</i>		
6.3	Endocrine glands Heart-vessel rabbit system	2
7.3	Rabbit lymphatic system	2

8.3	Rabbit nervous system. Analyzers.	2
9.3	Blood supply, lymphatic drainage and innervation of parts of the body and viscera of a domestic rabbit.	2
	Total	18

7. Self-study work

N by order	Control questions and tasks for self-study	Hours
		f/f
<u>Chapter 1: Somatic group of systems.</u> <i>General anatomy. Introduction to anatomy. Basic morphological concepts. General osteology. Characteristics of the skeleton. Axial skeleton. Morpho-functional characteristics of the limbs. Skeleton of the limbs. Arthrology. General myology. Special myology. Dermatology. Glandular skin derivatives. skin derivatives. Features of the structure of somatic organs in a rabbit.</i>		
1	To work out methods for the manufacture of bone anatomical preparations	6
2	Learn to dissect the muscles of the trunk and limbs	4
3	Determine the thickness of the skin; hair type (guides, guard, down); pulp, claws	6
4	Determine the number of milk particles and their topography	4
<u>Chapter 2: Visceral group of systems.</u> <i>General splanchnology. Body cavities. Serous formations in body cavities. Characteristics of the digestive apparatus. Respiratory apparatus. Genitourinary apparatus of the female. Sexual apparatus of the male. Features of the structure of the insides of a rabbit.</i>		
5	To work out the methods of autopsy of a corpse and determine the topography of organs located in the thoracic, abdominal and pelvic cavities	4
6	Determine the features of the digestive organs in a rabbit	4
7	Conduct morphometric studies of lymphoid formations of the rabbit's digestive apparatus	6
7	Make an educational anatomical preparation: lungs, kidneys, genitourinary organs of a rabbit	4
<u>Chapter 3: Integrated group of systems.</u> <i>General angiology. Circulatory circles. Heart. Venous highways of the body. Lymphatic system. Organs of hemocytopoiesis and immune defense. Endocrine gland system. General neurology. Spinal cord. Spinal nerves. Brain. Cranial nerves. Characteristics of the autonomic nervous system. Esthesiology. Features of the structure of the organs of the integral group in a rabbit.</i>		
8	Preparation of vessels associated with the chambers of the heart Identify the main arterial and venous vessels in the rabbit's body	2
9	Dissect the main lymph nodes	2
10	Determine the topography of the adrenal and pancreas	2
11	Preparation of somatic nerves	4

12	Determine the topography of the branches of the vagus nerve and their innervation zones	2
13	Determination of the structure of the organs of the outer ear.	2
14	To make and design a museum anatomical preparation (tasks for students)	8
	Total	60

8. Teaching methods

(According to the structure of the academic discipline)

During the teaching of the subject, the applicant uses both classical teaching methods (lecture, laboratory lesson, independent work) and specific methods due to the peculiarities of this discipline (work with macroscopic preparations, independent preparation, production of educational and museum preparations).

All lectures are accompanied by multimedia presentations with a large number of visualizations in the form of slides, photographs, drawings, diagrams and with the use of educational films. This greatly helps to keep the attention of applicants and helps to increase the assimilation of the material. The practice of giving problem lectures is also used, when at the beginning of the lecture students are asked a certain problematic question and, as the lecture material is presented, answers are found to explain and solve it. This process is significantly facilitated by a constant dialogue between the lecturer and the audience, which helps to eliminate the passivity of applicants, encourage and involve them in active cooperation, and constantly monitor the level of residual knowledge.

When conducting laboratory classes, teachers try to explain the structure of individual organs and organ systems as a whole. This contributes to the high efficiency of learning and provides the acquired knowledge of a practical nature. These macropreparations, tabular funds of the department are also an integral part of the independent work of students in their free time. If necessary, they can get professional advice from the teacher on duty.

9. Control methods

- ❖ oral interview;
- ❖ test control;
- ❖ credit.

During the current and final control, the means of assessing the results of learning in the discipline are standardized computer tests.

The final semester control (credit) is determined by the sum of the actually scored rating points from the current control and the individual educational and research task.

Current control is carried out during the semester by means of a survey (oral or test), as well as checking the quality of mastering the topics of independent work.

When choosing the criteria for assessing the assimilation of the discipline program by the applicant, the implementation of the program and the assimilation of the material in terms of lecture and laboratory classes, as well as the implementation of the independent work provided for by the program, were taken into account.

All types of control (oral interview, written interview, test interview) are closely related and organized in such a way as to stimulate the effective independent work of applicants and ensure an objective assessment of the level of their knowledge.

After completing the study of the discipline (part of the discipline), the final control is carried out in the form of an exam (test) and the applicant can score from 60 to 100 points inclusive during the semester at the control points.

**The content of the section is of a recommendatory nature and is adjusted in accordance with the content of the academic discipline.*

10. Distribution of points received by applicants (credit)

In the process of studying the course, the success of applicants is determined by conducting ongoing and final controls (credit and exam).

Current testing, answers in class and control of independent work						Total points
Chapter 1		Chapter 2		Chapter 3		60-100
T <u>1</u>	T <u>2</u>	T <u>3</u>	T <u>4</u>	T <u>5</u>	T <u>6</u>	
0-100	0-100	0-100	0-100	0-100	0-100	
Overall rating score (ORS = R+E)						0-100

T_1, T_2... T_6 – topics of chapters.

The grade that a higher education applicant receives for conducting an intermediate (current) control (CurC) consists of the points that the applicant receives during testing (T), which are 30%; the points that the applicant receives during activity in classes (Cl), which are 40%; and the points for mastering the independent work block (InW), which are 30%.

$$\text{CurC} = T \times 0,3 + Cl \times 0,4 + InW \times 0,3$$

In each section of the educational component, current control is carried out (**current control** - CurC).

For applicants in the fall (spring) semester, when the final knowledge test is completed with an undifferentiated credit (UDC), the final sum of points (UDC points) is the arithmetic average of the points of the four current tests of the fall (spring) semester:

$$\text{UDC points} = (\text{CurC } 1 + \text{CurC } 2 + \text{CurC } 3) / 3$$

Based on the results of the semester control, the applicant's transcript is assigned a "pass/fail" grade on the national scale.

11. Distribution of points received by applicants (exam)

Current testing, answers in class and control of independent work			Total points	
Chapter 1	Chapter 2	Chapter 3	According to the results	Exam

						of the chapters (R)	(E)
T <u>1</u>	T <u>2</u>	T <u>3</u>	T <u>4</u>	T <u>5</u>	T <u>6</u>	((T <u>1</u> +T <u>2</u> +... T <u>6</u>)/n)x60%	Ex40%
0-100	0-100	0-100	0-100	0-100	0-100		
Overall rating score (ORS = R+E)						0-100	

T1, T2... T8 – topics of chapters, n – number of topics.

The final control of the academic performance of applicants is carried out in the form of an exam based on the results of computer testing. The exam grade for the educational component (discipline) is determined on a 100-point scale.

The exam grade (EG) is 40% of the total final grade (FG).

$$EG = ETS \times 0,4$$

where: ES – exam score; ETS– exam testing scores, which account for 40% of the points scored during exam testing.

The final grade for the discipline is given on a 100-point scale. It is calculated as the average arithmetic value (AAV) of all the grades received by the student from the current control (CurC) of the assimilation of the material of the sections, with their subsequent conversion into points according to the following formula:

$$AAV = (\text{CurC chapter.1} + \text{CurC chapter.2} + \text{CurC chapter.3}) / 3$$

$$\text{CurCS} = AAV \times 0,6$$

where: CurCS – current control scores, which make up 60% of the total final score; AAV is the arithmetic average value of all grades received by the student from the current control

The applicant can score up to 60 points inclusive at the control points of the mastery of the sections within 2 semesters.

Thus, the final grade (FG) is calculated using the formula:

$$FG = EG + \text{CurCS}$$

The results of the tests are displayed in the DBTU Moodle system. All forms of control are included in the 100-point assessment scale.

12. Scale: national and ECTS and assessment criteria for determining the level of knowledge and skills

The control of students' knowledge and skills in the discipline is carried out in accordance with the use of the European system of transfer and accumulation of ECTS credits.

Basic provisions:

The total number of current control measures that a student must pass in the discipline is determined taking into account the number of credits in the discipline.

Based on the results of the current control measure, the student's level of assimilation of the educational material is assessed according to the national scale and the ECTS scale.

The number of points received by the student in the assessment of the final control is correlated with the marks on the national scale and the ECTS scale in accordance with Table

1. Rating scale

<i>100-point scale</i>	National scale	interpretation	ECTS scale
90 – 100	excellent	Excellent - excellent answer, the work is fulfilled with only a small number of errors	A
82 – 89	good	Very well - above average with a few errors	B
74 – 81		Well - in general the correct answer, the work with a certain number of serious errors	C
64 – 73	satisfactory	Satisfactorily – not bad, but with big number of errors	D
60 – 63		Quite satisfactorily – the work meets the minimum criteria	E
35– 59	unsatisfactory	Unsatisfactorily – with the possibility to pass again	FX
0-34		Unsatisfactorily – with compulsory passing of the work once again	F

Passing current tests is mandatory. A section is considered passed if the student has scored the minimum required number of points or more.

The results of the rating for the section are brought to the attention of students no later than the third working day after the control event and, in the absence of claims from the students, are considered final.

If the student does not agree with the decision to assign him rating points for the section, then he must immediately after their announcement file a written appeal to the head of the department and, within the specified period, take an oral attestation for the section before the commission. The composition of the appeal commission in each specific case is determined by the head of the department. The decision of the commission is final.

A student who did not appear for the current test has the right to take the missed current test during the assessment week.

The final rating of current performance in the discipline is calculated by averaging the ratings from all sections. The semester grade is given to the student taking into account the results of the final and current tests. The maximum number of points that a student can receive when studying a discipline is 100.

The exam involves a final test. If permission is granted for automatic exam enrollment, a student who has passed all current tests on time and has been certified with an "excellent" grade based on their results can receive a credit automatically. The semester grade in this case is the average grade for the sections.

The teacher is required to submit the completed credit and examination report to the academic department within the following deadline: for the exam - no later than the next business day after its completion.

The mastery of the independent work block is assessed on a scale according to the following regulations (Table 2)

Table 2.

Assessment criteria (100-point system, oral interview).

The level of formation of a student's knowledge and skills in the academic discipline, both during the final and current control, is assessed on a 100-point scale with subsequent conversion of grades into the national scale and the ECTS grading scale.

№	Criteria	Maximum number of points	Description
1	Completeness of the answer	30 points	The answer covers all the main aspects of the question, reveals its content in accordance with the curriculum.
2	Correctness and accuracy of presentation	20 points	The answer does not contain factual, logical or terminological errors.
3	Consistency and logic	10 points	The answer is logically structured, without inconsistent or chaotic fragments.
4	Language and style of presentation	10 points	The expression is competent, clear, using professional terminology.
5	Independent thinking	10 points	The student demonstrates the ability to draw his own conclusions, analyze, compare, give examples.
6	Additional knowledge (outside the main program)	10 points	The answer contains references to modern sources, interdisciplinary connections, and the latest data.
7	Ability to answer additional questions	10 points	The student confidently responds to the teacher's clarifying or in-depth questions, provides additional arguments or examples.

The conversion of grades on a 100-point scale to the national scale and ECTS scale is carried out according to the table:

Total points for all types of learning activities	Mark according to ECTS scale	Mark according to national scale
90 – 100	A	excellent
82 – 89	B	good
74 – 81	C	
64 – 73	D	satisfactory
60 – 63	E	
35 – 59	FX	unsatisfactory
0 – 34	F	

Activity in classes is assessed on a scale with a maximum of 100 points in accordance with the following regulations (Table 3)

Table 3.

ACTIVITY ASSESSMENT SCALE IN CLASSES

ECTS scale	National scale	Points	Score interpretation
A	Excellent	90-100	the student works actively during classes, provides complete answers to the teacher's questions and shows a deep mastery of the material, is able to express his own opinion when discussing situational tasks, demonstrates the ability to independently and reasonably present the material, analyze phenomena and facts, make independent generalizations and conclusions, correctly completes educational tasks, has a full synopsis of theoretical material, regularly visits the Moodle system
B	Very well	82-89	the student works actively during the lessons, the questions are covered in full, the presentation of the material is logical, substantiated by facts, with references to literary sources, the coverage of the questions is completed with conclusions, the student has shown the ability to analyze facts and events, as well as to complete educational tasks. However, there are inaccuracies in the answers, some minor errors, the presence of a full summary of the theoretical material, regular visits to the Moodle system
C	Well	74-81	the student works actively during the lessons, the questions are covered in full, the presentation of the material is logical, substantiated by facts, with references to literary sources, the coverage of the

			questions is completed with conclusions, the student has shown the ability to analyze facts and events, as well as to complete educational tasks. However, there are inaccuracies in the answers, some minor errors, there is insufficient reasoning when presenting the material, there is an incomplete synopsis of the theoretical material, partial access to the Moodle system
D	Satisfactorily	64-73	The student has generally mastered the essence of the issues on the topic, demonstrates knowledge of the lecture material and educational literature, tries to analyze facts and events, draw conclusions and solve situational problems. However, in class he behaves passively, responds only to the teacher's call, gives incomplete answers to questions, makes gross mistakes when covering theoretical material, incomplete notes on theoretical material, partial access to the Moodle system
E	Quite satisfactorily	60-63	the student lacks understanding of the main essence of the questions, conclusions, generalizations, demonstrated inability to solve situational problems, incomplete note-taking of theoretical material, partial access to the Moodle system
FX, F	Unsatisfactorily	0-59	lack of desire to participate in the discussion of issues, lack of notes, irregular visit to the Moodle system

Example: a student wrote the test tasks of the current control for 85 points. Multiply by 0.3. The result for the tests is 25.5 points. For independent work, the student received 88 points. Multiply by 0.3. The result for it is 26.4 points. For activity in classes - the student received 74 points. Multiply by 0.4. We get 29.6. In total, the number of points for the current control is 81.5 points. We average towards a larger number and get 82 points, which is equal to good B.

Regarding the final certification of the student, the result obtained for the student's current work (average value for 3 sections, multiplied by 0.6) and the final test work (multiplied by 0.4) is taken into account.

Example: Chapter I – 83 points, Chapter II – 95 points, Chapter III – 73 points. The sum of the points for the sections is $251 / 3 = 83,7$ (84) points – this is the average value. Next, $85 \times 0.6 = 50,4$ (50) points. The student wrote the final exam with 91 points. $91 \times 0.4 = 36.4$ points. Therefore, the total number of points for the discipline is $50.0 + 36.4 = 86.4$. We average towards a smaller number and get 86 points, which is equal to a good or B grade.

13. Methodological support

1. Slide presentations.
2. Collection of museum wet and dry macropreparations.
3. Thematic video library.
4. Photo.

14. Recommended Reading

Main literature:

1. Rabbit Anatomy: A Brief Photographic Atlas and Dissection Guide, Part 1: Muscular System // Mukhopadhyay, Soma, Ruggiero Wagner Lisa. Augusta University, 2023. <http://hdl.handle.net/10675.2/622930>

2. Rabbit Anatomy: A Brief Photographic Atlas and Dissection Guide, Part 2: Cardiovascular System // Mukhopadhyay, Soma, Ruggiero Wagner Lisa. Augusta University, 2023
<https://scholarlycommons.augusta.edu/items/1a0e2708-3848-463c-90b4-0fafdcb52f80>

3. Veterinary Anatomy of Domestic Animals. Textbook and Colour Atlas / Horst Erich König, Hans-Georg Liebich. 7th, updated and extended edition. 2014. – 859 p.

4. Miller's Anatomy of the Dog / Howard E. Evans PhD, Alexander de Lahunta DVM, PhD. 4th edition, 2013 – 871 p.

5. Oral cavity, Tongue, Salivary glands, Teeth / Andrea Heinzlmann. Veterinary University Department of Anatomy and Histology 2019. – 177 p.

Additional literature:

1. Somatic group of pet systems / Textbook for students of the Faculty of Veterinary Medicine in the specialties 211-Veterinary Medicine, 212-Veterinary Hygiene, Sanitation and Expertise. Additional edition, revised. Gorbatenko V. P., Bondarenko O. E., Miroshnikova O. S. // - Kharkiv: RVV Khdzva, 2019. – 245 p. (in Russian)

2. Entrails of Pets: A Textbook for Students of the Faculty of Veterinary Medicine in the Specialties 211-Veterinary Medicine, 212-Veterinary Hygiene, Sanitation and Expertise. / V. P. Gorbatenko, O. E. Bondarenko, O. S. Miroshnikova – Kharkiv: RVV KDZVA, 2020 – 220 p.

3. Vascular system. Endocrine glands of domestic animals. Textbook for students of the Faculty of Veterinary Medicine in the specialties 211: Veterinary Medicine /Gorbatenko V.P., Bondarenko O.E., Miroshnikova O.S. – Kharkiv: RVV Khdzva, 2020. – 164 p. (in Russian).

4. Nervous system. Pet Analyzers: Textbook for Students of the Faculty of Veterinary Medicine in the Specialties 211-Veterinary Medicine, 212-Veterinary Hygiene, Sanitation and Expertise / V.P. Gorbatenko, V.I. Symonenko, O.E. Bondarenko, O.S. Miroshnikova. – Kharkiv: RVV KDZVA, 2020 – 173 p.

5. Kushch M.M., Miroshnikova O.S., Fesenko I.A., Birka O.V. Anatomy of poultry: Textbook for students of the Faculty of Veterinary Medicine in the specialty 211 Veterinary Medicine. View. 2nd, ex. and additional. Kharkiv: RVV DBTU. 2023. 140 p. (Ukraine).

6. Kushch M.M., Miroshnikova O.S., Fesenko I.A., Birka O.V. Anatomy is the equivalent of living. Methodical manual on topographic anatomy for conducting educational practice of 1st year students of the Faculty of Veterinary Medicine. Kharkiv. DBTU. 2023. 44 p. (Ukraine).

7. International Veterinary Anatomical Nomenclature. In Latin, Ukrainian and English / [V. T. Khomich, V. S. Levchuk, L. P. Goralsky, Y. S. Shykh, I. G. Kalinovska]. – Kyiv, 2005. – 388 p.

15. Electronic information resources

1. Electronic course of the discipline "Rabbit Anatomy" for students in the specialty "Veterinary Medicine"
<http://moodle.btu.kharkiv.ua/course/view.php?id=1675>

16. Changes and additions

(to methodological support and recommended literature)

What is withdrawn from the work program	What is introduced into the work program	Date of consideration by the department