



MINISTRY OF EDUCATION AND SCIENCE OF

State Biotechnology University

Faculty of Veterinary Medicine.
(name of the educational and research institute/faculty)

"Approved"

Head of the Department
Veterinary surgery and reproductology

(name department)

Professor
(Slusarenko D/V)
(signature) (last name and initials)

" 18 " 6 2025__ p.

Department of Veterinary Surgery and Reproductology
(name of the department)

WORK PROGRAM

ACADEMIC DISCIPLINE

" **GENERAL AND SPECIAL SURGERY** "
(code and name of the discipline)

Level of higher education	<u>master</u> (name)
Field of expertise	<u>21 Veterinary medicine</u> (code and name)
Specialty.	<u>211 Veterinary medicine</u> (code and name)
Educational program	<u>Veterinary medicine</u> (name)

Kharkiv - 2025

Compilers: D., Professor D.V. Slyusarenko; Candidate of Veterinary Sciences, Associate Professors K.A. Sinyahovska, D.V. Sarbash, P.O. Zaika, Assistant A.S. Kochevenko.

((academic title, surname and initials))

The curriculum of the discipline was approved at an expanded meeting of the Department of Veterinary Surgery and Reproductive Medicine
(name of the department)

Protocol of: " 18 " 6 2025 No. 11

Work program agreed upon

Guarantor of the educational program _____ professor Naumenko SV _____)
(name of the PPO)

" 5 " 6 2025



_____ Naumenko SV _____
(signature) (last name and initials)

The validity period has been extended to:

" " 20 p. minutes of the meeting of the Board of Directors of the _____ head of the department _____
(name of the department) _____ (signature) (_____ (last name and initials))

" " 20 p. minutes of the meeting of the Board of Directors of the _____ head of the department _____
(name of the department) _____ (signature) (_____ (last name and initials))

" " 20 p. minutes of the meeting of the Board of Directors of the _____ head of the department _____
(name of the department) _____ (signature) (_____ (last name and initials))

1. Description of the discipline

Name of indicators	Characteristics of the discipline			
	full-time education			
Number of credits– 11 .	Status of the discipline:			
	<i>mandatory</i>			
Sections – 5	A year of preparation:			
	4	5		
	Semester			
Total number of hours– 330	7	8	9	10
	Lectures			
	14 h	16 h	14 h	–
	Practical, (seminar)			
	30 h	30 h	30 h	–
	Independent work			
Weekly hours for full-time students: classrooms - 134; independent work of the applicant - 136.	46 h	44 h	46 h	–
	Type of control:			
	Credit undif	Credit undif	E	C/W

2. Purpose and objectives of the discipline

The purpose of the discipline is to teach students the basic laws of species-specific animal reactivity, inflammation, surgical infection, principles of pathogenetic treatment of diseases in different parts of the animal body, to learn to recognize different groups of diseases, to treat animals correctly and to prevent diseases.

The **objectives of the discipline** are to study the achievements of modern veterinary surgery, external and internal conditions and causes that cause surgical diseases, patterns and mechanisms of their development, general clinical signs, patterns of course and characteristics of diseases, general principles and methods of recognizing diseases, patterns and processes of healing of body tissues.

Based on the study of these materials, students must acquire: the ability to use tools, special devices, instruments, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities, namely to master the methods of diagnosis and treatment of animals with surgical diseases (SC 2); the ability to conduct clinical research to formulate conclusions about the condition of animals or to establish a diagnosis, namely to apply clinical, radiological, instrumental research

The basic disciplines for the successful mastering of the program material of the discipline are the following: Anatomy of Domestic Animals, Animal Physiology,

Veterinary Microbiology, Clinical Diagnosis of Animal Diseases, Pathological Physiology, Operative Surgery with the Basics of Topographic Anatomy and Anesthesiology.

This discipline ensures the formation of the following program learning outcomes:

PLO 1. Know and correctly use the terminology of veterinary medicine.

PLO 2. Use information from domestic and foreign sources to develop diagnostic, treatment and business strategies.

PLO 4. Collect anamnestic data during registration and examination of animals, make decisions regarding the choice of effective methods of diagnosis, treatment and prevention of animal diseases.

PLO 5. To establish a connection between the clinical manifestations of the disease and the results of laboratory studies.

PLO 6. To develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies.

PLO 7. Formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of contagious and non-communicable diseases, as well as production and technological processes at enterprises for keeping, breeding or exploiting animals of various classes and species.

PLO 10. Propose and use expedient innovative methods and approaches to solving problem situations of professional origin.

3. Program of the discipline

Section 1.

Injuries of farm animals. Surgical infection. Pathogenetic therapy in veterinary surgery.

Injuries of farm animals, types of injuries, injurious factors, response to injury - inflammation: classification, phases, stages and clinical forms of manifestation.

Collapse, shock - treatment.

Surgical infection and its clinical manifestations (inflammatory agents, anaerobic, specific and putrefactive infection).

Furuncle, carbuncle, abscess, phlegmon, gas gangrene, malignant edema, sepsis. Etiology, pathogenesis, diagnosis and clinical symptoms.

Traumatic skin injuries. Pyoderma. Etiology, clinical signs, diagnosis, treatment and prevention.

General methods of treatment for inflammatory processes. Hydrotherapy, light and electrotherapy in surgical diseases. Pathogenetic therapy in veterinary surgery:

Blood transfusion and blood compatibility testing, types and techniques of hemotransfusion; novocaine blockades; tissue preparations, their mechanism of action and indications for use.

Recommended reading: 4, 5,8,10,11,13,20.

Section 2

Open and closed mechanical tissue damage. Necrosis, ulcers and fistulas. Burns and frostbite. Diseases of muscles, tendons and ligaments.

Open mechanical soft tissue injuries. Types, symptoms of wounds, biology of the wound process, granulation tissue and types of pathological granulation, wound healing agents (mechanical, physical, chemical and biological antiseptic).

Closed soft tissue injuries (bruises, sprains, tears). Hematomas and lymphoedema. Etiology, pathogenesis, clinical symptoms, treatment and prevention.

Necrosis, ulcers and fistulas, their causes and symptoms, principles of treatment.

Burns and frostbite, their types, pathogenesis, clinical signs and treatment methods.

Diseases of muscles, tendons and ligaments. Aseptic and purulent myositis, rheumatic myositis, tendonitis and tendovaginitis.

Sprains and tears, etiology, clinical picture, methods of treatment and prevention.

Recommended reading: 4,5,8,10,11,13,17,20

Section 3

Diseases of bones and joints, tumors and hernias. Diseases of blood and lymphatic vessels and peripheral nerves.

Thrombophlebitis, lymphangitis, paralysis and paresis. Causes of occurrence, clinical picture, methods of treatment and prevention.

Joint diseases: arthritis, joint dislocations, arthrosis, joint dysplasia, causes, clinical signs, diagnosis and treatment methods.

Bone diseases: periostitis, osteomyelitis, fractures. Fracture healing, bone callus, complications of fractures. Methods of treatment of bone pathology. Osteosynthesis.

Neoplasms and hernias, their etiology, classification, clinical signs, differential diagnosis and treatment methods.

Recommended reading: 4,5,10,11,13,15,19-22,24

Section 4

Diseases of the head, back of the head, neck, chest and withers Diseases of the abdomen, lumbar and pelvis, and genitourinary organs. Diagnostics of diseases of the extremities.

Diseases of the head area, wounds of the head area, paralysis of the facial, trigeminal nerves, tears of the nasal vertex, bleeding and neoplasms, horn injuries, diseases of the oral cavity (lip wounds, tongue hyperkinesis, cysts, tongue ulcers, diseases and abnormalities of the dentition, salivary gland diseases, actinomycosis, actinobacillosis of the head tissues).

Diseases of the neck, back of the head, chest. Inflammation of the jugular vein. Foreign bodies in the esophagus. Fractures and dislocations of the cervical vertebrae, mechanical injuries of the back of the head. Bursitis and purulent-necrotic injuries of the back of the head. Chest wounds and their complications.

Diseases of the back, lower back, pelvis, and abdomen. Purulent inflammation of the back and lumbar muscles. Vertebral fractures, spondylitis, spondyloarthrosis,

spondyloarthritis. Fractures of the pelvic bones. Wounds of the abdominal wall, hernias, ileus, peritonitis, diseases of the rectum - pararectal fistulas, abscesses, phlegmon.

Diseases of the genitourinary organs. Complications of castration of animals. Bladder diseases, diseases of the urethra, diseases of the foreskin, diseases of the penis, diseases of the scrotum and testes, prostatitis.

Diagnosis of diseases of the extremities. Diseases of the thoracic and pelvic extremities.

Recommended reading: 1,9,11,13,14,16,18,19,20,23,25

Section 5.

Veterinary orthopedics and ophthalmology

Anatomy and physiology of the distal limbs of productive animals. Diagnosis of hoof and hoof diseases in animals. Contusions, wounds, abscesses, phlegmon in the area of the crown, flesh, tissues of the crypt of the interdigital cleft. Pododermatitis (aseptic, purulent). Rheumatic hoof inflammation (acute, chronic). Wounds and ulcers of the sole. Necrosis of soft cartilage. Laminitis, PPD (Mortellaro's disease), hoof rot, necrobacteriosis. Wounds of the hoof joint. Podotrochleitis, fractures of the hoof and navicular bones. Types of hoof deformities in animals. Types of horseshoes and their structure and manufacture. Forging of horses. Orthopedic shoeing of horses.

Anatomy and physiology of the eye. General and special methods of animal research in eye diseases. Diseases of the eyelids and conjunctiva (blepharitis, conjunctivitis, eyelid sty, eyelid tumors). Diseases of the cornea (keratitis: superficial, uveal, parenchymal, deep, purulent, dry; corneal ulcers; chronic corneal opacity). Diseases of the vascular tract (uveitis, RRM, iris and choroidal abnormalities). Glaucoma in animals. Diseases of the retina (inflammation and hemorrhage of the retina, retinal detachment, retinopathy). Diseases of the lens (aphakia, luxation, cataract: congenital, traumatic, symptomatic, diabetic, age-related, toxic). Diseases of the vitreous (hemorrhages, opacification, displacement of the vitreous). Diseases of the optic nerve (neuritis, atrophy). Diseases of all parts of the eye (panophthalmitis, atrophy). Methods and peculiarities of the use of drugs in the treatment of eye diseases in animals. Methods of surgical interventions and pathogenetic therapy in the treatment of eye diseases in animals.

Recommended reading: 2,3,6,7,9,11,12,13,14,16,20

4. Structure of the discipline

[illegible]

Joint diseases: arthritis, joint dislocations, arthrosis, joint dysplasia, causes, clinical signs, diagnosis and treatment methods.			2		4	6
Bone diseases: periostitis, osteomyelitis, fractures. Fracture healing, bone callus, complications of fractures. Methods of treatment of bone pathology. Osteosynthesis.			2		4	6
Neoplasms and hernias, their etiology, classification, clinical signs, differential diagnosis and treatment methods.			2		4	4
Thrombophlebitis, lymphangitis, paralysis and paresis. Causes of occurrence, clinical picture, methods of treatment and prevention.						8
<i>Total for section 3</i>			6		12	24
Diseases of the head, back of the head, neck, chest and withers Diseases of the abdomen, lumbar and pelvis, and genitourinary organs. Diagnostics of diseases of the extremities.						
Diseases of the head area, wounds of the head area, paralysis of the facial, trigeminal nerves, tears of the nasal vertex, bleeding and neoplasms, horn injuries, diseases of the oral cavity: lip wounds, tongue hyperkinesis, cysts, tongue ulcers, diseases and abnormalities of the dentition, diseases of the salivary glands, actinomycosis, actinobacillosis of the head tissues.			4		4	8
Diseases of the neck, back of the head, chest. Inflammation of the jugular vein. Foreign bodies in the esophagus. Fractures and dislocations of the cervical vertebrae, mechanical injuries of the back of the head. Bursitis and purulent-necrotic injuries of the back of the head. Chest wounds and their complications.			2		2	6
Diseases of the back, lower back, pelvis, and abdomen. Purulent inflammation of the back and lumbar muscles. Vertebral fractures, spondylitis, spondyloarthrosis, spondyloarthritis. Fractures of the pelvic bones. Wounds of the abdominal wall, hernias, ileus, peritonitis, diseases of the rectum - pararectal fistulas, abscesses, phlegmon.			2		4	6
Diseases of the genitourinary organs. Complications of castration of animals. Bladder diseases, diseases of the urethra, diseases of the foreskin, diseases of the penis, diseases of the scrotum and testes, prostatitis.					6	
Diagnosis of diseases of the extremities. Diseases of the thoracic and pelvic extremities.			2		2	
<i>Total for section 4</i>			10		18	20
Veterinary orthopedics and ophthalmology						
Anatomy and physiology of the distal limbs of productive animals. Diagnosis of hoof and hoof diseases in animals. Contusions, wounds, abscesses, phlegmon in the area of the crown, flesh, tissues of the crypt of the interdigital cleft. Pododermatitis. Rheumatic inflammation of the hooves. Wounds and ulcers of the sole. Necrosis of pulpy cartilage. Laminitis, PPD, hoof rot, necrobacteriosis. Wounds of the hoof joint. Podotrochleitis, fractures of the hoof and navicular bones. Types of hoof deformities in animals. Types of horseshoes and their structure and manufacture. Forging of horses. Orthopedic shoeing of horses.			6		14	24

Anatomy and physiology of the eye. General and special methods of animal research in eye diseases. Diseases of the eyelids and conjunctiva. Diseases of the cornea. Diseases of the vascular tract. Glaucoma in animals. Diseases of the retina. Diseases of the lens. Diseases of the vitreous. Diseases of the optic nerve. Diseases of all parts of the eye. Methods and features of the use of drugs in the treatment of eye diseases in animals. Methods of surgical interventions and pathogenetic therapy in the treatment of eye diseases in animals.			8		16	22
<i>Total for section 5</i>			14		30	46
Total hours			44		90	136

5. Lecture classes

№ s/n	Name of the class topic	Number of hours
<i>Chapter 1. Injuries of farm animals. Surgical infection. Pathogenetic therapy in veterinary surgery.</i>		
1.	Introductory lecture on general and special surgery.	2
2.	Surgical infection and its clinical manifestations.	2
3.	Hemotransfusion in animals.	2
<i>Section 2: Open and closed mechanical tissue injuries. Necrosis, ulcers and fistulas. Burns and frostbite. Diseases of muscles, tendons and ligaments.</i>		
4.	Open soft tissue injuries.	2
5.	Closed soft tissue injuries and their clinical manifestations.	2
6.	Muscle diseases.	2
7.	Diseases of tendons and tendon sheaths, mucous membranes.	2
<i>Section 3. Diseases of bones and joints, tumors and hernias. Diseases of blood and lymphatic vessels and peripheral nerves.</i>		
8.	Diseases of the joints.	2
9.	Bone diseases.	2
10.	Neoplasms.	2
<i>Section 4. Diseases of the head, back of the head, neck, chest and withers Diseases of the abdomen, lumbar and pelvis, and genitourinary organs. Diagnosis of diseases of the extremities.</i>		
11.	Special surgery, its goals and objectives. Diseases in the head area.	2
12.	Diseases of the oral cavity in animals.	2
13.	Diseases in the chest and withers.	2
14.	Diseases in the abdomen.	2
15.	Diagnosis of diseases of the extremities.	2
<i>Chapter 5. Veterinary orthopedics and ophthalmology</i>		
16.	Definition of "veterinary orthopedics".	2
17.	Hoof and hoof diseases.	2
18.	Deformities of hooves and hooves.	2
19.	An understanding of veterinary ophthalmology.	2
20.	Diseases of the eyelids and conjunctiva.	2
21.	Diseases of the cornea.	2
22.	Diseases of the light refracting structures of the eye, diseases of the lens	2
	Together	44

6. Practical exercises

No s/n	Name of the class topic	Number of hours
<i>Section 1. Injuries of farm animals. Surgical infection. Pathogenetic therapy in veterinary surgery.</i>		
1.	Features of work in a modern surgical clinic	2
2.	Animal body reactions to trauma	2
3.	Aerobic infection: furuncle, carbuncle, abscess, phlegmon, gangrene. Anaerobic infection: gas abscess, gas phlegmon, gas gangrene, malignant edema. Skin diseases.	2
4.	A common surgical infection is sepsis.	2
5.	Pathogenetic therapy.	2
6.	Physiotherapy in the treatment of animals with surgical diseases. Light and electrotherapy.	2
7.	Novocaine therapy.	2
8.	Hemotransfusion.	2
9.	Types and methods of hemotransfusion.	2
<i>Section 2: Open and closed mechanical tissue injuries. Necrosis, ulcers and fistulas. Burns and frostbite. Diseases of muscles, tendons and ligaments.</i>		
10.	Closed soft tissue injuries.	2
11.	Open soft tissue injuries, bleeding and ways to stop it.	2
12.	Methods of examination of a wounded animal.	2
13.	Treatment of injured animals.	2
14.	Muscle diseases.	2
15.	Diseases of tendons and their sheaths. Torn tendons, types of tendon sutures. Diseases of the mucous membranes and synovial bags.	2
<i>Section 3. Diseases of bones and joints, tumors and hernias. Diseases of blood and lymphatic vessels and peripheral nerves.</i>		
16	Diseases of the joints of an inflammatory nature	2
17	Joint diseases of a non-inflammatory nature	2
18	Classification of bone fractures.	2
19	Osteosynthesis, its types and indications.	2
20	Neoplasms.	2
21	Modern methods of treatment of animals with neoplasms	2
<i>Section 4. Diseases of the head, back of the head, neck, chest and withers Diseases of the abdomen, lumbar and pelvis, and genitourinary organs. Diagnosis of diseases of the extremities.</i>		
22	Dentoalveolar pathology in animals. Diseases of the teeth.	2
23	Dentoalveolar pathology in animals. Periodontal diseases.	2
24	Diseases in the back of the head and neck.	2
25	Diseases in the lumbar and pelvic region.	2
26	Diseases in the abdomen. Ileus.	2
27	Complications associated with castration in different species of animals.	2
28	Diseases in the genitourinary organs of inflammatory nature.	2
29	Neoplasms of the genitourinary organs.	2
30	Diseases of the thoracic extremities. Diseases of the pelvic limbs.	2
<i>Section 5. Veterinary orthopedics and ophthalmology</i>		

31	The structure of individual parts of hooves and hooves in different species of animals.	2
32	Diagnosis of hoof and hoof diseases in animals.	2
33	Study of animals with diseased hooves and hooves in production conditions with different forms of animal housing	2
34	Hoof and hoof diseases. Differential diagnosis. Sole wounds, pododermatitis, inflammation in the area of the crown and flesh, Rusterholtz's ulcer, laminitis, PPD, hoof rot, necrobacteriosis.	2
35	Diseases of deep structures of the hoof. Diseases of the hoof joint, shuttle bursa, podotrochleitis. Founder and sinker.	2
36	Forging horses. Types of horseshoes, their structure and manufacture. Purpose and characteristics.	2
37	Methods of hoof cleansing in cattle with inflammatory processes and the use of pathogenic treatment agents.	2
38	Morphological and physiological characteristics of the organ of vision.	2
39	General and special methods of animal research in eye diseases.	2
40	Methods and peculiarities of using drugs in the treatment of eye diseases in animals.	2
41	Diseases of the eyelids, conjunctiva and cornea	2
42	Diseases of deep structures of the eye: vascular tract, retina, optic nerve.	2
43	Diseases of the light-refracting structures of the eye. Diseases of the vitreous: hemorrhages, opacification and prolapse.	2
44	Diseases of all parts of the eye and emergencies in veterinary ophthalmology.	2
45	Types of surgical interventions for the treatment of animals with eye diseases.	2
	Together	90

7. Independent work

№ s/n	Topic title	Number of hours
<i>Chapter 1. Injuries of farm animals. Surgical infection. Pathogenetic therapy in veterinary surgery.</i>		
1.	General and special methods of treatment of aseptic and purulent inflammation in different species of animals. Differential diagnosis of edema, infiltrates and proliferations. Exudates. Types of exudates.	4
2.	Classification and differential diagnosis of phlegmon and abscesses. Surgical methods of their treatment. Pathogens of anaerobic infection. Modern aspects of sepsis treatment in animals.	6
3.	Methods of manufacturing and use of tissue preparations of animal and plant origin in the treatment of animals with surgical pathology. Species-specific features of the use of novocaine blockades in animals with surgical pathology.	6
<i>Section 2: Open and closed mechanical tissue injuries. Necrosis, ulcers and fistulas. Burns and frostbite. Diseases of muscles, tendons and ligaments.</i>		
4.	Gunshot wound. Its features. Diagnosis, complications and methods of treatment. Features of the wound process in different species of domestic animals.	6
5.	Differential diagnosis of edema, hematomas, lymphoedema. Features of diagnosing closed injuries of varying degrees and providing medical care to animals.	4

6.	Coagulation and collisional necrosis, gangrene: their etiopathogenesis, differential diagnosis and principles of treatment.	8
7	Burns. Frostbite.	8
8	Basic principles and modern methods of treatment of aseptic myositis and tendovaginitis in animals. Contractures. Types of contractures. Etiopathogenesis, clinical signs, treatment.	
<i>Section 3. Diseases of bones and joints, tumors and hernias. Diseases of blood and lymphatic vessels and peripheral nerves.</i>		
9.	Differential diagnosis of osteoarthritis, hemarthrosis, ankylosis, dystrophy and dislocation. Modern methods of treatment of joint dysplasia in small animals. Features of treatment for purulent joint inflammation. Complications of purulent arthritis and methods of their elimination.	6
10	Diseases of peripheral nerves: paralysis, paresis. Diseases of blood and lymphatic vessels.	8
11.	Complications arising from open fractures. Their diagnosis, clinical signs, treatment and prevention. Bone regeneration. Phases and conditions that accelerate bone healing. Differential diagnosis of periostitis, hyperostosis, exostosis. Clinical signs, treatment and prevention.	6
12.	Papillomatosis. Features of the course and treatment in different species of animals. Surgical methods of treatment of benign tumors in animals. Modern principles of reconstructive surgery.	4
<i>Section 4. Diseases of the head, back of the head, neck, chest and withers Diseases of the abdomen, lumbar and pelvis, and genitourinary organs. Diagnosis of diseases of the extremities.</i>		
13.	Diseases of the ears. Otitis media. Classification and distribution of dental diseases. Abnormalities of tooth development and dental occlusion. Caries, gingivitis, periodontitis, osteomyelitis. X-ray diagnostics in veterinary dentistry. Drawing up a plan for the admission of animals with diseases of the oral cavity. Justification of prescribed methods of diagnosis and treatment.	8
14.	Inflammation of the jugular vein, esophageal obstruction. Drawing up a plan for the admission of animals with diseases in the back of the head and neck, diseases in the chest area. Justification of prescribed diagnostic and treatment methods.	6
15.	Diseases in the lumbar region: spondylitis, spondyloarthritis, fractures, dislocations. Diseases in the pelvis and perineum. Fractures of the pelvic bones, paraproctitis, perineal hernias, rectal prolapse. Drawing up a plan for the admission of animals with diseases in the lumbar and pelvic region. Justification of prescribed diagnostic and treatment methods.	6
<i>Section 5. Veterinary orthopedics and ophthalmology</i>		
16.	Innervation and blood supply of hooves and hooves in animals. Necrosis and ossification of soft cartilage in horses. Features of the use of conduction anesthesia for hoof and hoof diseases in animals. Features of hoof care with different methods of keeping cows.	24
17.	Differential diagnosis of keratitis using modern devices and equipment. Pathological condition of the chamber moisture of the eye. Causes, diagnosis and treatment. Diagnosis and treatment of massive eye lesions in cattle. Breed specific features of the spread of eye diseases in animals. Diseases of the lacrimal apparatus. Inflammation of the lacrimal sac, lacrimal tubules and nasolacrimal duct. Their diagnosis and treatment.	22
	Together	136

8. Teaching methods

1. Lecture classes.
2. Practical classes.
3. Independent study.

9 Control methods

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

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.*

11. Distribution of points received by applicants

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

Current testing, answers in class and control of independent work							Total points
Chapter 1		Chapter 2		Chapter 3	Chapter 4	Chapter 5	60-100
T__1-9		T__10-15		T__16-21	T__22-23	T__31-45	
0-100	0-100	0-100	0-100	0-100	0-100	0-100	
Overall rating score (ORS = R+E)							0-100

T__, T__... T__ – 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:

$$\text{UDC points} = (\text{CurC 1} + \text{CurC 2} + \text{CurC 3} + \text{CurC 4}) / 4$$

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

12. 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	Chapter 4	Chapter 5	According to the results of the chapters (R)	Exam (E)
T__1-9	T__10-15	T__16-21	T__22-23	T__31-45	$((T1+T2+...+T8)/n) \times 60\%$	Ex40%
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:

$$\text{AAV} = (\text{CurC chapter.1} + \text{CurC chapter.2} + \text{CurC chapter.3} + \text{CurC chapter.4}) / 4$$

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

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:

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

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

13. Performance of term paper (case history)

In the assessment, the maximum number of points for term paper (case history) is 100 points. According to Table 1, the total number of points is distributed according to the following criteria: for the completion of the theoretical part, the design of the work and the knowledge of the applicant during the defence of the work.

Table 1

Grade for term paper (case history) (maximum possible)

Term paper assessment components (case history)	Maximum points
Theoretical content	30*
Work design (presence / absence of errors)	20*
Content of answers during defense (oral commission (at least 3 NPP))	50
Total for term paper	100

* – if the student disagrees with the number of points that the teacher assigned for the theoretical content and design of the course work, then this issue is considered during the commission defense.

14. 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 4 sections, multiplied by 0.6) and the final test work (multiplied by 0.4) is taken into account.

Example: Section I – 83 points, Section II – 95 points, Section III – 73 points, Section IV – 88 points. The sum of the points for the sections is $339 / 4 = 84.75$ (85) points – this is the average value. Next, $85 \times 0.6 = 51$ 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 $51.0 + 36.4 = 87.4$. We average towards a smaller number and get 87 points, which is equal to a good or B grade.

14. Methodological support

- 1) Sliusarenko DV, Sinyagovska KA, Sarbash DV, Zaika PA, Kochevenko AS
Methodical recommendations for conducting laboratory and practical classes in the course of general surgery for students of the second level of higher education (master's degree) of the 4th year on the basis of the PZSO and the 3rd year on the

basis of the junior specialist of the Faculty of Veterinary Medicine. Kh.: DBTU 2024- 112 p.

- 2) Slyusarenko D.V., Sinyagovska K.A., Sarbash D.V., Zaika P.O., Kochevenko A.S. Methodical recommendations for conducting laboratory and practical classes in the course of special surgery for students of the second level of higher education (master's degree) of the 4th year on the basis of the PZSO and the 3rd year on the basis of the junior specialist of the Faculty of Veterinary Medicine. Kh.: DBTU 2024 - 52 p.
- 3) Sliusarenko DV, Sinyagovska KA, Sarbash DV, Zaika PA, Kochevenko AS Methodical recommendations for writing a medical history in the course of general and special surgery for students of the second level of higher education (master's degree) of the 5th year on the basis of the PZSO and the 4th year on the basis of the junior specialist of the Faculty of Veterinary Medicine. Kh.: DSTU 2024 - 10 p.
- 4) Workbook for laboratory classes in the discipline "General Surgery" / D.V. Slyusarenko, K.A. Sinyagovska, D.V. Sarbash, A.S. Kochevenko - Kh.
- 5) Workbook for laboratory classes in the discipline "Surgical diseases of productive animals" / D.V. Slyusarenko, K.A. Sinyagovska, D.V. Sarbash, A.S. Kochevenko - Kh.

15. Recommended reading

Main literature:

1. Borysevych V.B., Panko I.S., Teres M.O., Izdepsky V.Y. Special Veterinary Surgery. - Kyiv: USGA Publishing House, 1993. - 493 p.
2. Borysevych V.B. Veterinary orthopedics and ophthalmology / Borysevych V.B. - K. : Urozhay, 1994. - 136 p.
3. Veterinary orthopedics / [Borysechych V.B., Borysechych B.V., Petrenko O.F., Khomin N.M.] - K., 2007. 136 p.
4. General Veterinary and Medical Surgery / edited by Prof. Borysevych V.B. - K.: Naukivyi mir, 2001.
5. General Surgery: Textbook / S.D. Khimich, M.D. Zheliba, I.D. Gerich et al. eds.
6. Kalashnyk I.O. Forging horses and hoof diseases / Kalashnyk I.O., Yurchenko L.I., Sarbash D.V. - Kharkiv: RVP Original, 1998. 216 p.
7. Orthopedics of even and odd-footed animals / [Borysevych V.B., Borysechych B.V., Sukhonos V.P., Petrenko O.F., Khomin N.M. et al.
8. Pantyo V.I. General surgery: a textbook / V.I. Pantyo, V.M. Shimon, O.O. Baldizhar - Uzhhorod: IVA, 2010. -464 p.
9. Panko IS, Vlasenko VM, Gamota AA, Rublenko MV, Izdepskyi VY, Petrenko OF, Ilnytskyi MG Special Veterinary Surgery - Bila Tserkva, BDAU, 2003. - 416 p.
10. Petrenko O.F. et al. "Surgery of Veterinary Medicine" - K.: Higher Education, 2005. 399.
11. Workshop: General and special surgery: / D.V. Sarbash, D.V. Slyusarenko, K.A. Sinyagovska, O.V. Kantemir, P.O. Zaika. Kharkiv, 2020. - 265 c.

12. Sarbash D.V. Orthopedics of horses / Sarbash D.V., Kantemir O.V. Slyusarenko D.V. - [2nd ed.
13. Dictionary of Veterinary Surgery Terms // Vlasenko V.M., Tikhoniuk L.A. - Bila Tserkva, 2008. 360 p.
14. Special Veterinary Surgery / [Panko I.S., Borysevych V.B., Teres M.O. et al.

Supporting literature:

15. Summers B., Cummings J., de Lahunta A. Veterinary Neuropathology. St. Louis: Mosby. - 1995. - 401 p.
16. Veterinary medical ophthalmology: a textbook / [Borysevych V.B., Borysevych B.V., Petrenko O.F. et al.
17. Kozynets H.P. Burn disease / H.P. Kozynets, O.N. Kovalenko, S.V. Slesarenko // Art of treatment. - 2006. - No. 12. - P. 9-15.
18. Orthopedics of dogs and cats. Part II. Surgical pathology of the skull and spine: a textbook / V.P. Sukhonos, M.O. Malyuk, M.A. Kulida, P.K. Tkachenko, V.O. Solonin, V.V. Doroshchuk - K.: NUBiP of Ukraine, 2018. - 108 c.
19. Orthopedics of dogs and cats. Part III. Surgical pathology of the skeleton of the extremities: a textbook / V.P. Sukhonos, M.O. Malyuk, M.A. Kulida, P.K. Solonin, V.V. Tkachenko, V.O. Doroshchuk - K.: NUBiP of Ukraine, 2019. - 290 c.
20. Pathogenetic therapy in inflammatory processes in animals / [Panko IS, Vlasenko VM, Levchenko VI et al.
21. Petrenko O.F. Extracortical osteosynthesis in small animals // Veterinary Medicine of Ukraine. - 2000. - №4. - P. 34-35.
22. Petrenko O.F., Kalynovskyi H.M. Morphology of bone callus in the healing of closed fractures of tubular bones // Veterinary Medicine of Ukraine. - 1998. - №2 - P. 35-36.
23. Disorders of dental changes and their complications in cattle Bulletin of the Bila Tserkva State Agrarian University - Bila Tserkva, 2010. - P. 101-105. Sarbash D.V. Slyusarenko D.V. Sinyagovska K.A.
24. Tumors of animals: etiology, pathogenesis, diagnosis, complex therapy / [Gamota AA, Zaviryukha VI, Krupnyk YG, Mysak AR] - Lviv: Galician Publishing Union, 2007. 168 p.
25. Sarbash DV, Sinyagovska KA Clinical forms of manifestation and etiology of dentoalveolar lesions in dogs. Bulletin of the Bila Tserkva State Agrarian University - Bila Tserkva, 2005. - Issue 34. - P. 157-164.

16. Electronic information resources

(Link)

<http://moodle.btu.kharkiv.ua/course/view.php?id=3204>

17. Amendments and additions

(to the methodological support and recommended literature)

What is from the work program	What is to the work program	Date of consideration by the
----------------------------------	--------------------------------	------------------------------------

		department