Ministry of Agriculture of the Russian Federation
Federal State Budgetary Educational Institution
of Higher Education
"St. Petersburg State University of Veterinary Medicine"

APPROVED BY
Vice-Rector for Educational
Work and Youth Policy
_____ Sukhinin AA
June 27, 2025

Department of General, Private and Operative surgery

EDUCATIONAL WORK PROGRAM

for the discipline

"Orthopedics"

The level of higher education
SPECIALIST COURSE

Specialty 36.05.01 Veterinary Medicine
Profile: «General clinical veterinary medicine»
Full-time education
Education starts in 2025

Reviewed and adopted
at the meeting of the department
on June 26, 2025.
Protocol No. 9

Head of the Department
Of General, Private and Operative surgery,
Doctor of Veterinary Medicine, Docent
_____ Nechaev A.Yu.

Saint Petersburg
2025

1. GOALS AND OBJECTIVES OF DISCIPLINE

Primary goal in training a veterinary specialist in the discipline “Orthopedics” is to provide graduates with theoretical knowledge, practical skills and abilities in the prevention, diagnosis and treatment of the most common diseases of the hooves and hooves in farm animals.

To achieve this goal, it is necessary to solve the following tasks:

a) The general educational task is to in-depth familiarize students with the processes of inflammation, regeneration, transplantation and recovery; patterns and mechanisms of development of orthopedic pathology and

provides fundamental biological education in accordance with the requirements for higher educational institutions of biological profile.

b) The applied problem covers issues related to the technology of organizing and conducting surgical operations; general and specific signs of orthopedic diseases; fundamentals and methods of complex treatment and prevention of injuries and various manifestations of surgical infection; clinical, hematological, morphological, biochemical and physiological indicators of the injured organism and creates a conceptual basis for the implementation of interdisciplinary structural and logical connections in order to develop medical thinking skills.

c) The special task is to familiarize students with modern trends and methodological approaches used in orthopedics to solve problems in animal husbandry and veterinary medicine, as well as existing achievements in this area.

2. LIST OF PLANNED MASTERING RESULTS BY DISCIPLINE (MODULE), CORRELATED WITH THE PLANNED RESULTS OF MASTERING THE EDUCATIONAL PROGRAM

As a result of mastering the discipline, the student prepares for the following types activities, V compliance with educational standard Federal State Educational Standard IN 05/36/01 "Veterinary medicine".

Area of professional activity:
13 Agriculture

Types of professional activity tasks:

- Medical;
- Expert control;
- Scientific and educational.

Student competencies formed as a result of mastering the discipline

Studying the discipline should form the following competencies:

a) Professional competencies (PC):

Development of an animal research program and conducting a clinical study of animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2):

PC-2$_{ID-1}$Be able to conduct animal research using digitalequipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography;

PC-2$_{ID-2}$Be able to interpret and analyze special data(instrumental) methods for studying animals to verify the diagnosis;

PC-2$_{ID-11}$ Know the technique of staging functional tests in animals.

Staging diagnosis on basis analysis data anamnesis, general, special(instrumental) and laboratory research methods (PC-3):

PC-3$_{ID-1}$ Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases;

PC-3$_{ID-4}$ Know techniques interpretations and analysis data special(instrumental) methods for studying animals;

PC-3$_{ID-7}$ Know the generally accepted criteria and classifications of animal diseases, approved lists of animal diseases.

Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6):

PC-6$_{ID-1}$ Be able to use special equipment, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use;

PC-6$_{ID-2}$ Be able to restrain animals to ensure safety during carrying out medical procedures;

PC-6$_{ID-3}$ Be able to keep records and reports on diseases and treatment animals using digital technologies;

PC-6$_{ID-4}$ Know the types of non-drug therapy, including physical therapy, used in veterinary medicine and indications for their use;

PC-6$_{ID-6}$ Know the methods and techniques of non-drug effects on the body animals;

PC-6$_{ID-7}$ Know the methods fixation of animals during their treatment;

PC-6$_{ID-8}$ Know the forms and rules for filling out a register for registering patients animals and animal medical history in accordance with veterinary registration requirements, including in digital format.

3. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF THE MPEP

Discipline B.1.B.12 “Orthopedics” refers to the disciplines of the part formed by participants in educational relations of the federal state educational standard of higher education in the specialty 36.05.01 “Veterinary Medicine” (specialty level). Mastered by full-time students in the 9th semester.

To study this discipline, a student must have a full range of knowledge and skills in the anatomy of domestic animals, cytology, physiology, clinical diagnostics, and surgery. The study of the discipline “Orthopedics” is preceded by the study of the disciplines: anatomy, pathological anatomy, clinical diagnosis, internal non-communicable diseases, clinical pharmacology, operative surgery.

4. SCOPE OF THE DISCIPLINE “Orthopedics”

4.1. Scope of the “Orthopedics” discipline for full-time study

Type of educational work	Total hours	Semesters
		9
Classroom lessons (total)	**48**	**48**
Including:		
Lectures, including interactive forms	16	16
Practical lessons (PL), including interactive forms, including:	32	32
Practical training (PT)	6	6
Independent work (total)	**60**	**60**
Type of intermediate certification (test, exam)	**Test**	**Test**
Total labor intensity hours/credits	**108/3**	**108/3**

5. CONTENT OF THE DISCIPLINE “Orthopedics”

5.1. Contents of the discipline "ORTHOPEDICS" for full-time study

No.	Name	Formed competencies	Semester	Types of educational work, including independent student work and labor intensity (in hours)			
				L	PL	PT	IW
1.	Introduction to veterinary orthopedics. Anatomy of a horse's toe. Growth of the hoof horn and its physiological properties. Hoof mechanism. Anatomy of a cattle finger. Growth of the hoof horn and its physiological properties. Claw mechanism.	Development of an animal research program and conducting a clinical study of animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2ID-1**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2ID-2**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2ID-11**Know the technique of staging unctional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3ID-1**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3ID-4**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3ID-7**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6ID-1**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6ID-2**Be able to restrain animals to ensure safety during treatment procedures; PC-6**ID-3**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6ID-4**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; PC-6 ID-6 Know the methods and techniques of non-drug effects on the animal body; PC-6**ID-7**Know the methods of restraining animals during their treatment; PC-6**ID-8**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

2.	Orthopedic forge. Hoof (hooves) care. Construction and equipment of a forge. Horseshoes of different designs and purposes. Horseshoe spikes and nails. Making horseshoes in a training forge. Shoeing a horse. Assessing the quality of shoeing. Working offhoof trimming techniques using anatomical specimens	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2ID-1**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2ID-2**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2ID-11**Know the technique of setting functional samples in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3ID-1**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3ID-4**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3ID-7**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6ID-1**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6ID-2**Be able to restrain animals to ensure safety during treatment procedures; **PC-6ID-3**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6ID-4**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; **PC-6 ID-6**Know the methods and techniques of non-drug effects on the animal body; **PC-6ID-7**Know the methods of restraining animals during their treatment; **PC-6ID-8**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	-	2	3	6

3.	Diseases in the area hooves in horses: ossification of the soft cartilage, pododermatitis, rheumatic inflammation of the hoof	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2$_{ID-11}$**Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3$_{ID-4}$**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; PK-6$_{ID-3}$Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6$_{ID-4}$**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; **PC-6$_{ID-6}$**Know the methods and techniques of non-drug effects on the animal body; PC-6$_{ID-7}$Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	2	-	6

4.	Diseases in the area horses' hooves: frog rot, synovitis, arthritis of the toe joints	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2ID-1**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2ID-2**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2ID-11**Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3ID-1**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3ID-4**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3ID-7**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6ID-1**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6ID-2**Be able to restrain animals to ensure safety during treatment procedures; **PC-6ID-3**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6ID-4**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; PC-6 ID-6 Know the methods and techniques of non-drug effects on the animal body; **PC-6ID-7**Know the methods of restraining animals during their treatment; **PC-6ID-8**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

5.	Diseases in the area hooves in horses: subtrochleitis, fractures, necrosis, caries of the hoof and navicular bones.	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; PC-2**$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2$_{ID-11}$**Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3$_{ID-4}$**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; **PC-6$_{ID-3}$**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6$_{ID-4}$**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; **PC-6$_{ID-6}$**Know the methods and techniques of non-drug effects on the animal body; PC -6$_{ID-7}$Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

6.	Diseases in the area claws: bruises, wounds, ulcers, phlegmon of the corolla	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2$_{ID-11}$**Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; PC-3$_{ID-4}$Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; **PC-6$_{ID-3}$**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6$_{ID-4}$**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; **PC-6$_{ID-6}$**Know the methods and techniques of non-drug effects on the animal body; **PC-6$_{ID-7}$**Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

7.	Diseases in the area claws: bruises, wounds, ulcers, tissue phlegmon interdigital arch;inflammation interdigital gland in sheep; parachondral phlegmon	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2$_{ID-11}$**Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3$_{ID-4}$**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; **PC-6$_{ID-3}$**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6$_{ID-4}$**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; PC-6$_{ID-6}$Know the methods and techniques of non-drug effects on the animal body; **PC-6$_{ID-7}$**Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

8.	Diseases in the area claws: pododermatitis, laminitis, synovitis	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2$_{ID-11}$**Know the technique of setting functional samples in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3$_{ID-4}$**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; **PC-6$_{ID-3}$**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; PC-6$_{ID-4}$Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; PC-6$_{ID-6}$Know the methods and techniques of non-drug effects on the animal body; **PC-6$_{ID-7}$**Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

9.	Diseases in the area claws: arthritis of the finger joints, fractures, necrosis, caries of the claw bones, navicular bones	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; PC-2$_{ID-11}$Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; **PC-3$_{ID-4}$**Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; **PC-6$_{ID-3}$**Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; PC-6$_{ID-4}$Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; **PC-6$_{ID-6}$**Know the methods and techniques of non-drug effects on the animal body; **PC-6$_{ID-7}$**Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	2	3	-	6

10.	Execution technique mainoperations for necrosis of the soft cartilage, necrosis of the deep tendon fingerflexor, wounds of the coffin joint and navicular bursa, tiloma, specific ulcer of the sole. Using dummies and anatomical preparations to practice surgical techniques for hoof diseases	Development of an animal research program and conduct of a clinical trial animals using special (instrumental) and laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$**Be able to conduct animal research using digital equipment andusing special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; **PC-2$_{ID-2}$**Be able to implementinterpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; **PC-2$_{ID-11}$**Know the technique of staging functional tests in animals. Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$**Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; PK-3$_{ID-4}$Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research; **PC-3$_{ID-7}$**Knowgenerally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$**Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use; **PC-6$_{ID-2}$**Be able to restrain animals to ensure safety during treatment procedures; PC-6$_{ID-3}$Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies; **PC-6$_{ID-4}$**Know the types of non-drugtherapies, including physiotherapy, used in veterinary medicine, and indications for their use; **PC-6$_{ID-6}$**Know the methods and techniques of non-drug effects on the animal body; **PC-6$_{ID-7}$**Know the methods of restraining animals during their treatment; **PC-6$_{ID-8}$**Know the forms and rules for filling them outa journal for registering sick animals and animal medical history in accordance with veterinary accounting requirements, including in digital format.	9	-	1	3	6
TOTAL FOR SEMESTER 9				**16**	**26**	**6**	**60**

6. THE LIST OF EDUCATIONAL AND METHODOLOGICAL SUPPORT FOR THE INDEPENDENT WORK OF STUDENTS IN THE DISCIPLINE

6.1. Methodological guidelines for independent work

1. Treatment and prevention of diseases of the hooves of cattle : an educational and methodical manual / V. V. Baylov, A. A. Stekolnikov, M. A. Narusbaeva [et al.] ; V. V. Baylov [and others]; Ministry of Agriculture of the Russian Federation, SPbGAVM. - Saint Petersburg : SPbGAVM Publishing House, 2017. - 68 p. – URL: https://search.spbguvm.informsystema.ru/viewer.jsp?aWQ9NjgmcHM9Njg (date of request: 26.06.2025).- Access mode: for authorization. EB SPbGUVM users.

6.2. Literature for independent work

1. Private veterinary surgery : a textbook for universities / B. S. Semenov, A.V. Lebedev, A. N. Eliseev [et al.] ; edited by B. S. Semenov and A.V. Lebedev. - 2nd ed. - Moscow : KolosS, 2003. - 496 p. : ill. - (Textbooks and textbooks for students of higher educational institutions).
2. Danny, Hamish R. Orthopedics of dogs and cats / Danny, Hamish R., Butterworth Stephen J. ; translated from English by M. Dorosh, L. Eveleva. Moscow : AQUARIUM BOOK, 2004. 696 p. : ill. (Practice of a veterinarian).

7. LIST OF BASIC AND ADDITIONAL LITERATURE NECESSARY FOR MASTERING THE DISCIPLINE

a) basic literature:

1. Veterinary orthopedics : a textbook for universities / A. A. Stekolnikov, B. S. Semenov, V. A. Molokanov, E. I. Veremey. Moscow : KolosS Publ., 2009. 295 p. (Textbooks and teaching aids for students of higher educational institutions)
2. Private veterinary surgery : a textbook for universities / B. S. Semenov, A.V. Lebedev, A. N. Eliseev [et al.] ; edited by B. S. Semenov and A.V. Lebedev. - 2nd ed. - Moscow : KolosS, 2003. - 496 p. : ill. - (Textbooks and textbooks for students of higher educational institutions).

b) additional literature:

1. Orthopedics of veterinary medicine : a textbook / E. I. Veremey, V.A. Lukyanovsky, S.V. Timofeev, I.S. Kolesnichenko. Saint Petersburg : Lan Publ., 2003. 352 p. (Textbooks for universities. Special literature).
2. Clinical orthopedics of cattle : a textbook / V.E. Iosifovich, V.M. Rukol, V.A. Zhurba [et al.] ; edited by E. I. Veremey. - St. Petersburg : Quadro, 2022. - 200 p. -URL: https://elibrica.com/934dffa8-5032-4e24-bf95-2c5555ffd756 (date of request: 06/26/2025). - Access mode: for authorization. users of the Elibrica EBS.
3. Clinical orthopedics and horse forging : a textbook / E.I. Veremey, V.M. Rukol, V.A. Zhurba [et al.] ; edited by E. I. Veremey. - St. Petersburg : Quadro, 2022. - 276 p. - URL: https://elibrica.com/b083cc97-fc71-4929-9aac-3945514232a5 (date of request: 06/26/2025). - Access mode: for authorization. users of the Elibrica EBS.
4. Practicum on general and private veterinary surgery : a textbook for university students specializing in veterinary medicine / A.V. Lebedev, V. A. Lukyanovsky, B. S. Semenov [et al.] ; edited by B. S. Semenov. Moscow : Kolos Publ., 2000. 536 p. (Textbooks and teaching aids for students of higher educational institutions).

8. THE LIST OF RESOURCES OF THE INFORMATION AND TELECOMMUNICATION NETWORK "INTERNET" NECESSARY FOR MASTERING THE DISCIPLINE

Students can use the following online resources to prepare for practical classes and perform independent work.:

1. https://meduniver.com – Medical information website.
2. http://operabelno.ru – The main surgical portal.
3. http://physiotherapy.ru – Portal on physiotherapy.

Electronic library systems:

1. EBS "SPBGUVM"
2. Scientific electronic Library ELIBRARY.RU

3. Electronic books published by Prospekt Nauki publishing house
http://prospektnauki.ru/ebooks/
4. EBS Yurayt
5. EBS "Elibrica" published by "Quadro" https://elibrica.com/

9. METHODOLOGICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE

Methodological recommendations for students are a set of recommendations and explanations that allow the student to optimally organize the process of studying this discipline.

The content of methodological recommendations, as a rule, may include:

- Tips for planning and organizing the time needed to study the discipline. Description of the sequence of student actions, or "scenario for studying the discipline."

The morning time is the most fruitful for educational work (from 8-14 o'clock), then the afternoon (from 16-19 o'clock) and the evening time (from 20-24 o'clock). The most difficult material is recommended to be studied at the beginning of each time interval after rest. After 1.5 hours of work, a break (10-15 minutes) is required; after 4 hours of work, the break should be 1 hour. Part of the scientific organization of labor is mastering the technique of mental work. Normally, a student should devote about 10 hours a day to studying (6 hours at the university, 4 hours at home).

- Recommendations for working on lecture material When preparing for a lecture, the student is recommended to:

1) review the recordings of the previous lecture and recall previously studied material in memory;

2) It is useful to review the upcoming material of the future lecture;

3) if independent study of individual fragments of the topic of the last lecture is assigned, then it must be completed without delay;

4) prepare yourself psychologically for the lecture.

This work includes two main stages: taking notes of lectures and subsequent work on lecture material.

Note-taking means drawing up notes, i.e. a brief written statement of the content of something (oral presentation - speech, lecture, report, etc. or a written source - document, article, book, etc.).

The method of work when taking notes on oral presentations differs significantly from the method of work when taking notes from written sources.

By taking notes from written sources, the student has the opportunity to repeatedly read the desired passage of text, reflect on it, highlight the main thoughts of the author, briefly formulate them, and then write them down. If necessary, he can also note his attitude to this point of view. While listening to a lecture, the student should postpone most of the complex of work indicated above for another time, trying to use every minute to record the lecture, and not to comprehend it - there is no time left for this. Therefore, when taking notes from a lecture, it is recommended to separate fields on each page for subsequent entries in addition to the notes.

After recording a lecture or taking notes, you should not leave work on the lecture material until you begin preparing for the test. It is necessary to do as early as possible the work that accompanies note-taking of written sources and which was not possible to do while recording the lecture - read your notes, deciphering individual abbreviations, analyze the text, establish logical connections between its elements, in some cases show them graphically, highlight main thoughts, note issues that require

additional processing, in particular, teacher consultation.

When working on the text of a lecture, the student needs to pay special attention to the problematic questions posed by the teacher when giving the lecture, as well as to his assignments and recommendations.

For each lecture, practical lesson and laboratory work, the number, topic, list of issues covered, volume in hours and links to recommended literature are provided. For classes conducted in interactive forms, their organizational form must be indicated: computer simulation, business or role-playing game, analysis of a specific situation, etc.

- Recommendations for preparing for practical classes

Practical (seminar) classes constitute an important part of students' professional training. The main goal of conducting practical (seminar) classes is to develop analytical, creative thinking in students by acquiring practical skills. Practical classes are also conducted with the aim of deepening and consolidating the knowledge gained at lectures and in the process of independent work on regulatory documents, educational and scientific literature. When preparing for a practical lesson for students, it is necessary to study or repeat theoretical material on a given topic.

When preparing for a practical lesson, the student is recommended to adhere to the following algorithm;

1) get acquainted with the plan of the upcoming lesson;

2) study the literature sources that were recommended and familiarize yourself with the introductory notes to the relevant sections.

Methodological instructions for practical (seminar) classes in the discipline, along with the work program and schedule of the educational process, refer to methodological documents that determine the level of organization and quality of the educational process.

The content of practical (seminar) classes is recorded in the working curriculum of the disciplines in the sections "List of topics for practical (seminar) classes."

The most important component of any form of practical training is assignments. The basis of the assignment is an example, which is analyzed from the perspective of the theory developed in the lecture. As a rule, the main attention is paid to the formation of specific skills and abilities, which determines the content of students' activities - problem solving, laboratory work, clarification of the categories and concepts of science, which are a prerequisite for correct thinking and speech.

Practical (seminars)classes perform the following tasks:

- stimulate regular studying recommended literature, A Also attentive attention to the lecture course; secure knowledge, received V process lecture training And independent work on literature;
- expand the volume professionally significant knowledge, skills, abilities;
- allow you to check the correctness of previously acquired knowledge;
- instill skills of independent thinking and oral presentation;
- contribute free use of terminology;
- provide the teacher with the opportunity to systematically monitor the level of students' independent work.

Methodological instructions for practical (seminar) classes in the discipline should be focused on modern business conditions, current regulatory documents, advanced technologies, on the latest achievements of science, technology and practice, on modern ideas about certain phenomena and the reality being studied.

- Recommendations for working with literature.

Working with literature is an important stage of a student's independent work in mastering a subject, contributing not only to consolidation of knowledge, but also to

broadening his horizons, mental abilities, memory, ability to think, present and confirm his hypotheses and ideas. In addition, research skills necessary for future professional activities are developed.

When starting to study literature on a topic, it is necessary to make notes, extracts, and notes. It is imperative to take notes on the works of theorists, which allow one to comprehend the theoretical basis of the study. For the rest, you can limit yourself to extracts from studied sources. All extracts and quotations must have an exact "return address" (author, title of work, year of publication, page, etc.). It is advisable to write an abbreviated name of the question to which the extract or quotation relates. In addition, it is necessary to learn how to immediately compile a card index of specialized literature and publications of sources, both proposed by the teacher and identified independently, as well as refer to bibliographic reference books, chronicles of journal articles, book chronicles, and abstract journals. In this case, publications of sources (articles, book titles, etc.) should be written on separate cards, which must be filled out in accordance with the rules of bibliographic description (surname, initials of the author, title of work. Place of publication, publisher, year of publication, number of pages, and for journals articles – journal name, year of publication, page numbers). On each card, it is advisable to record the thought of the author of the book or a fact from this book on only one specific issue. If the work, even in the same paragraph or phrase, contains further judgments or facts on another issue, then they should be written out on a separate card. The presentation should be concise, accurate, without subjective assessments. On the back of the card you can make your own notes about this book or article, its contents, structure, what sources it was written on, etc.

• Explanations about working with test materials for the course, recommendations for completing homework.

Testing allows you to determine whether the actual behavior of the program corresponds to the expected behavior by performing a specially selected set of tests. A test is the fulfillment of certain conditions and actions necessary to verify the operation of the function being tested or its part. Each question in the discipline must be answered correctly by choosing one option.

10. EDUCATIONAL WORK

As part of the implementation of the discipline, educational work is carried out to form a modern scientific worldview and a system of basic values, the formation and development of spiritual, moral, civil and patriotic values, a system of aesthetic and ethical knowledge and values, attitudes of tolerant consciousness in society, the formation in students of the need to work as the first vital necessity, the highest value and the main way to achieve success in life, to understand the social significance of your future profession.

11. LIST OF INFORMATION TECHNOLOGIES USED IN THE EDUCATIONAL PROCESS

11.1. IN educational process by discipline provided usage information technologies:

- ✓ Conducting practical exercises with using multimedia;
- ✓ interactive technologies (carrying out dialogues, collective discussion of various approaches to solving one or another educational and professional task);
- ✓ interaction with students via email;
- ✓ joint job in Electronic information and educational environment SPbGUVM:

https://spbguvm.ru/academy/eios

11.2. Software
List of licensed and freely distributed software, including domestically produced ones

No.	Name of technical and computer training aids recommended by sections and topics of the program	License
1	MS PowerPoint	67580828
2	Libre Office	free software
3	OS Alt Education 8	AAO.0022.00
4	ABIS "MARK-SQL"	02102014155
5	MS Windows 10	67580828
6	System Consultant Plus	503/KL
7	Android OS	free software

12. MATERIAL AND TECHNICALBASE REQUIRED FOR IMPLEMENTATION OF THE EDUCATIONAL PROCESS IN THE DISCIPLINE

Name of the discipline (module), practice in accordance with the curriculum	**Name of special premises and premises for independent work**	**Equipping special rooms and rooms for independent work**
Orthopedics	101 (196084, St. Petersburg, Chernigovskaya str., building 5) Classroom for conducting seminar-type classes, group and individual consultations, ongoing monitoring and intermediate certification	*Specialized furniture:* desks, chairs, educational board, Visual aids and educational materials: posters on orthopedics
	104 (196084, St. Petersburg, Chernigovskaya str., building 5) Classroom for conducting seminar-type classes, group and individual consultations, ongoing monitoring and intermediate certification	*Specialized furniture:* desks, chairs, blackboard. *Technical training aids* multimedia projector, screen, laptop. *Visual aids and educational materials:* orthopedics posters
	105 (196084, St. Petersburg, Chernigovskaya str., building 5) Classroom for conducting seminar-type classes, group and individual consultations, ongoing monitoring and intermediate certification	*Specialized furniture* desks, chairs, blackboard. *Visual aids and educational materials:* orthopedics posters
	122 (196084, St. Petersburg, Chernigovskaya str., building 5) Classroom for conducting seminar-type classes, group and individual	*Specialized furniture:* desks, chairs, blackboard. *Visual aids and educational materials:* bone preparations;

	consultations, ongoing monitoring and intermediate certification	orthopedics posters.
	124 (196084, St. Petersburg, Chernigovskaya str., building 5) Classroom for conducting seminar-type classes, group and individual consultations, ongoing monitoring and intermediate certification	*Specialized furniture:* desks, chairs, blackboard. *Visual aids and educational materials* orthopedics posters
	206 Large reading room (196084, St. Petersburg, Chernigovskaya str., building 5) Room for independent work	*Specialized furniture*: tables, chairs *Technical training aids:* computers with an Internet connection and access to the electronic information and educational environment
	214 Small reading room (196084, St. Petersburg, Chernigovskaya str., building 5) Room for independent work	*Specialized furniture:* tables, chairs *Technical training aids:* computers with an Internet connection and access to the electronic information and educational environment
	324 Department of Information Technologies (196084, St. Petersburg, Chernigovskaya str., building 5) Room for storage and preventive maintenance of educational equipment	*Specialized furniture:* tables, chairs, special equipment, materials and spare parts for preventive maintenance of educational equipment

The working program was compiled by:
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Annex 1

Ministry of Agriculture of the Russian Federation
Federal State Budgetary Educational Institution
of higher education
"Saint Petersburg State University of Veterinary Medicine"

Department of General, Private and Operative surgery

FUND OF ASSESMENT TOOLS
for the discipline
" ORTHOPEDICS"

Level of higher education
SPECIALIST COURSE

Specialty 36.05.01 Veterinary medicine
Profile: «General clinical veterinary medicine»
Full-time education.

Education starts in 2025

Saint Petersburg
2025

1. PASSPORT OF THE ASSESSMENT FUND

Table 1

No.	Formed competencies	Controlled sections (topics) disciplines	Evaluation tool
1.	Developing an animal research program and conducting clinical research on animals using special (instrumental) And laboratory methods, including to clarify the diagnosis (PC-2): **PC-2$_{ID-1}$** Be able to produce study of animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography; PC-2$_{ID-2}$ Be able to implement interpretation and analysis of data from special (instrumental) animal research methods to verify the diagnosis; PC-2$_{ID-11}$ Know the technique of setting functional samples in animals. Making a diagnosis based on anamnesis data analysis, general, special (instrumental) and laboratory research methods (PC-3): **PC-3$_{ID-1}$** Be able to stage diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; PK-3$_{ID-4}$ Know the techniques interpretation and analysis of data from special (instrumental) methods of animal research; PC-3$_{ID-7}$ Know the generally accepted criteria and classifications of animal diseases, approved lists of animal diseases. Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules (PC-6): **PC-6$_{ID-1}$** Know how to use special, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its operation; PC-6$_{ID-2}$ Be able to record animals to ensure safety during medical procedures;	Section 1. Introduction to veterinary orthopedics. Anatomy and physiology hoof horn	Colloquium Test
2.		Section 2. Orthopedic forge. Hoof care (with hooves).	Colloquium, Test
3.		Section 3. Hoof diseases in horses in the region pulp cartilage and skin base	Colloquium, Test
4.		Section 4. Hoof diseases in horses joint areas	Colloquium, Test
5		Section 5. Hoof diseases in horses in the area of the frog and distal bones finger section	Colloquium, Test
6		Section 6. Hoof diseases in artiodactyls in the area of the corolla	Colloquium, Test
7		Section 7. Hoof diseases in artiodactyls in the arch area interdigital fissure	Colloquium, Test
8		Section 8. Hoof diseases in artiodactyls in the region soles of the hoof	Colloquium, Test

9	PC-6ID-3 Be able to maintain accounting recordsdocumentation on diseases and treatment animals using digital technologies; PC-6ID-4Know the speciesnon-drug therapy, including physiotherapy, used in veterinary medicine, and indications for their use; PC-6ID-6 Knowmethods and techniques of non-drug effects on the animal body; PC-6ID-7Know the methods of restraining animals during their treatment; PC-6ID-8 Know the formsand rules for filling out a journal for registering sick animals and the animal's medical history in accordance with the requirements of veterinary accounting, including in digital format.	Section 9. Hoof diseases in artiodactyls in the area of the finger joints	Colloquium, Test
10		Section 10. Technique for performing basic operations for diseases of the hooves and hooves	Colloquium, Test

Approximate list of assessment tools

table 2

No.	Name evaluative	Brief description of the evaluation	Performance evaluative
	facilities	facilities	funds in the fund
1.	Colloquium	A means of monitoring the assimilation of educational material of a topic, section or sections of a discipline, organized as a training session in the form of an interview between a teacher and students	Questions on topics/sections of the discipline
2.	Test	A system of standardized tasks that allows you to automate the procedure for measuring the level of knowledge and skills student	Test task fund

2. INDICATORS AND CRITERIA FOR ASSESSING COMPETENCIES AT VARIOUS STAGES OF THEIR FORMATION, DESCRIPTION OF ASSESSMENT SCALES

Table 3

Planned results of mastering the competency	Mastery level				Evaluation tool
	dissatisfy flax	satisfactorily	Fine	Great	
PC-2 Developing an animal research program and conducting clinical research on animals using special (instrumental) and laboratory methods, including to clarify the diagnosis					
PC-2$_{ID-1}$ Be able to producestudy of animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography	The level of knowledge is below the minimum requirements, had placegross mistakes	Minimum acceptable level of knowledge, many minor mistakes were made	Level of knowledge in the amount corresponding to the training program, several minor errors were made errors	The level of knowledge corresponds to the training program, without errors.	Colloquium, test, test work
PC-2$_{ID-2}$Be able to realize data interpretation and analysis special (instrumental) animal research methods to verify the diagnosis	When deciding standard tasks Not demonstrated vans basic skills, took place rude errors	Demonstrated basic skills, solved typical tasks with not rude mistakes, all completed tasks, but not in in full	Demonstrated we are all basic skills, solved All main tasks with not rude mistakes, all completed assignments in full volume, but some with shortcomings	Demonstrated all major skills, all solved main tasks with separate insignificant shortcomings, all completed assignments in full volume	Colloquium, test,

PC-2$_{ID-11}$Know the technique performing functional tests in animals	When deciding standard tasks Not demonstrated basic vans skills, took place rude errors	Available minimum set skills for solutions standard tasks with some shortcomings	Demonstrated we are basic skills when deciding standard tasks With some shortcomings	Demonstrated skills at decision non-standard tasks without errors and shortcomings	Colloquium, tests, control, Job
PC-3 Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods					
PC-3$_{ID-1}$Be able to implement making a diagnosis in in accordance with generally accepted criteria and classifications, lists of animal diseases	Know ledge level below minimum requirements, had place of blunders	Minimum valid knowledge level, a lot was allowed minor mistakes	Level of knowledge in volume, appropriate program preparation, several allowed not rough errors	Level of knowledge in volume, appropriate program preparation, without errors.	Colloquium, tests

PC-3$_{ID-4}$ Know the techniques data interpretation and analysis special (instrumental) animal research methods	When deciding standard tasks Not demonstrated vans basic skills, took place rude errors	Demonstrated basic skills, solved typical tasks with not rude mistakes, all completed tasks, but not in in full	Demonstrated we are all basic skills, solved All main tasks with not rude mistakes, all completed assignments in full volume, but some with shortcomings	Demonstrated all major skills, all solved main tasks with separate insignificant shortcomings, all completed assignments in full volume	Colloquium, tests,
PC-3$_{ID-7}$Know the generally accepted criteria and classifications animal diseases,	When deciding standard demonstrated basic vans skills, took place rude errors	Available minimum set standard tasks with some shortcomings	Demonstrated we are basic standard tasks With some shortcomings	Demonstrated skills at tasks without errors and shortcomings	Colloquium, tests,
PC-6 Selection of non-drug therapy methods, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules					

PC-6$_{ID-1}$Know how to usespecial, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its operation	The level of knowledge is below the minimum requirements, had place gross mistakes	Minimum acceptable level of knowledge, many minor mistakes were made	Level of knowledge in the amount corresponding to the training program, several minor errors were made errors	The level of knowledge corresponds to the training program, without errors.	Colloquium, test, test work
PC-6$_{ID-2}$Be able to fix animals to ensure safety during treatment procedures	The level of knowledge is below the minimum requirements, had Place gross mistakes	Minimum acceptable level of knowledge, many minor mistakes were made	Level of knowledge in the amount corresponding to the training program, several minor errors were made errors	The level of knowledge corresponds to the training program, without errors.	Colloquium, test, test work
PC-6$_{ID-3}$Be able to keep recordsreporting documentation on animal diseases and treatment using digital technologies	When solving standard problems basic skills have not been demonstrated, there were serious mistakes	The main skills, solved typical problems with minor errors, completed all tasks, but not in full	All basic skills demonstrated, all solved basic tasks with minor errors, all tasks completed in full volume, but some with flaws	Demonstrated all major skills, all the main tasks with some minor shortcomings have been solved, all tasks completed in full	Colloquium, test, test work

PC-6$_{ID-4}$ Know the speciesnon-drug therapy, including physiotherapy, used in veterinary medicine, and indications for their use	When solving standard problems basic skills have not been demonstrated, there were rough	The main skills, solved typical problems with minor errors, completed all tasks, but not in full	All basic skills demonstrated, all solved main tasks with minor errors, all tasks completed in full	Demonstrated all major skills, all the main tasks with some minor shortcomings have been solved, all tasks have been completed in full	Colloquium, tests, test, work
PC-6$_{ID-6}$ Know methods and techniques of non-drug effects on the animal body	When solving standard problems basic skills have not been demonstrated, there were rough	The main skills, solved typical problems with minor errors, completed all tasks, but not in full	All basic skills demonstrated, all solved main tasks with minor errors, all tasks completed in full	Demonstrated all major skills, all the main tasks with some minor shortcomings have been solved, all tasks have been completed in full	Colloquium, test, test work
PC-6$_{ID-7}$ Know fixation methods of the animals during their treatment	When solving standard problems basic skills have not been demonstrated, there were rough	The main skills, solved typical problems with minor errors, completed all tasks, but not in full	All basic skills demonstrated, all solved basic tasks with minor errors, all tasks completed in full	Demonstrated all major skills, all the main tasks with some minor shortcomings have been solved, all tasks completed in full	Colloquium, test, test work
PC-6$_{ID-8}$Know the forms and rulesfilling out a logbook for registering sick animals and the animal's medical history in accordance with the requirements of veterinary registration, including in digital format	The level of knowledge is below the minimum requirements, had Place gross mistakes	Minimum acceptable level of knowledge, many minor mistakes were made	Level of knowledge in the amount corresponding to the training program, several minor errors were made errors	The level of knowledge corresponds to the training program, without errors.	Colloquium, test, test work

3. LIST OF CHECK TASKS AND OTHER MATERIALS REQUIRED FOR ASSESSMENT OF KNOWLEDGE, ABILITIES, SKILLS AND ACTIVITY EXPERIENCE

3.1. Typical tasks for ongoing progress monitoring

3.1.1. Questions for the colloquium

PC-2"Able to develop animal research programs and conduct clinical studies of animals using special (instrumental) and laboratory methods, including to clarify the diagnosis":
PC-2$_{ID-1}$Be able to conduct animal research using digitalequipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography;

1. Anatomy of a finger in single-hoofed animals.
2. Biomechanics of the limb in single-hoofed animals.
3. Anatomy of fingers in artiodactyls.
4. Biomechanics of the limb in artiodactyl animals.
5. A special diagnostic method for diseases of the shuttle block.
6. X-ray contrast venography of hooves for laminitis in horses.
7. Methods for studying diseases of the soft cartilages.

PC-2$_{ID-2}$Be able to interpret and analyze special data(instrumental) methods for studying animals to verify the diagnosis;

8. Diagnosis of hoof diseases using novocaine blockades.
9. Orthopedic examination of the animal.
10. Types and degrees of lameness in animals.

PC-2$_{ID-11}$Know the technique of performing functional tests in animals.

11. Application of the wedge test in horses
12. Using trial hoof mites
13. Anesthesia of the volar nerves of the finger
14. Additional research methods (x-ray diagnostics, ultrasound)

15. **PC-3**"Able to make a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods":

PC-3$_{ID-1}$Be able to make a diagnosis in accordance withgenerally accepted criteria and classifications, lists of animal diseases;

16. How should the forge be located in relation to other buildings?
17. What fire safety measures must be observed in a forge.
18. What premises does the production and training forge consist of?
19. What tools are used to make horseshoes.
20. What is the purpose of horseshoes.
21. Which horseshoe is called smooth and why.
22. What grade of steel is used to make horseshoes?

PC-3 $_{ID-4}$ Know techniques interpretations And analysis data special (instrumental) methods for studying animals;

23. How to determine the quality of a horseshoe nail.
24. List the stages of making a smooth horseshoe.
25. Why is a bevel made along the edge of a horseshoe?

PC-3$_{ID-7}$Know the generally accepted criteria and classifications of animal diseases, approved lists of animal diseases.

26. What is the purpose of the lapel?
27. What sizes of factory horseshoes are there?
28. Types of spikes and their purpose.
29. What are the numbers of horseshoe nails?

PC-6 "Able to select methods of non-drug therapy, including physiotherapeutic methods for the treatment of animals, conduct therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules":

PC-6$_{ID-1}$Be able to use special equipment, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use;

30. Where is the forge nest located and what are its dimensions.
31. How the tuyere works and what is its purpose.
32. At what distance from the forge is the anvil installed?
33. How to determine the height of the anvil above the floor level depending on the height of the black smith.
34. How to determine the quality of hardening of the steel of the front part of the anvil.
35. List black smith tools.
36. Why is blacksmith's coal moistened with water?
37. What are the degrees of metal heating?

PC-6$_{ID-2}$Be able to restrain animals to ensure safety duringcarrying out medical procedures;

38. Requirements for a shoeing arena
39. How to properly measure a hoof
40. Rules for trimming hooves of cattle and horses
41. Organization of the farriery department on farms and hoof care.

PC-6$_{ID-3}$Be able to keep records and reports on diseases and treatmentanimals using digital technologies;

42. List the stages of shoeing a horse.
43. List the parameters of a properly fitted horseshoe.
44. Why you shouldn't use a screwdriver when driving horseshoe nails
45. How are the thoracic and pelvic limbs fixed during shoeing?

PC-6$_{ID-4}$Know the types of non-drug therapy, including physical therapy,used in veterinary medicine and indications for their use;

46. Hoof deformation in horses (compressed, obtuse, oblique).
47. Hoof deformation (flat, convex, crooked).
48. Shoeing cattle.
49. Puncture wounds of the sole and digital crumb, complications with them.
50. Purulent arthritis of the claw joint in cattle.

PC-6$_{ID-6}$Know the methods and techniques of non-drug effects on the bodyanimals;

51. Limax (tiloma).
52. Rheumatic inflammation of the hooves (laminitis).
53. Mortellaro's disease.
54. Cellulitis of the corolla.
55. Ulcers of the sole.

PC-6$_{ID-7}$ Know the methodsfixation of animals during their treatment;

56. Pododermatitis.
57. Ossification of the soft cartilage.
58. Necrosis of the deep digital flexor tendons.
59. Chronic verrucous pododermatitis (arrow cancer).

60. Rusterholtz's ulcer.

PC-6$_{ID-8}$Know the forms and rules for filling out a register for registering patientsanimals and animal medical history in accordance with veterinary registration requirements, including in digital format.

61. Damage to the hooves due to foot and mouth disease.
62. Damage to the hooves due to necrobacteriosis.
63. Purulent inflammation of the shuttle bursa.
64. Necrosis of the soft cartilages.
65. Treatment methods for cracked and split hooves in horses.
66. Operations in the area of the fingers in artiodactyl animals.
67. Operations in the toe area in single-hoofed animals digital flexor.

3.1.2. Tests

PC-2 “Able to develop animal research programs and conduct clinical studies of animals using special (instrumental) and laboratory methods, including to clarify the diagnosis”:
PC-2 ID-1 Be able to study animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography;

1. How is a disease in cattle characterized by proliferative thickening of the skin of the interdigital fornix called?
A. tiloma
B. Rusterholtz's ulcer
C. Mortellaro's disease D. laminitis
2. Where is Rusterholtz's ulcer located in cows? A. on the sole of the hoof
B. on the skin of the interdigital fissure
B. on the corolla
G. on the hoof border
3. Which should expect forecast at purulent inflammation ungulatea horse's joint?
A. favorable B. cautious
V. doubtful
G. not favorable
4. How often do orthopedic medical examinations of cows on the farm be carried out? A. once a quarter
B. once every six months
C. once a year
D. once a month
5. What method is used to treat cracks in the horny hoof wall in horses?
A. clearing the horny wall with a hoof knife
B. fastening with rivets
B. shoeing onto a horseshoe with an additional turn
D. processing the horny hoof wall with a rasp
6. What is the function of the hoof border?
A. produces glaze of the horny wall
B. protects the hoof wall from injury
C. improves hemodynamics in the hoof
G. connects the horny sole and the wall
7. What hoof deformities can develop with laminitis in a horse?
A. compressed hoof under the crown
B. hedgehog hoof
C. crooked hoof

D. butt hoof
8. In what area of the hoof are nails driven in when shoeing a horse?
A. arrow of the hoof
B. white line of the sole of the hoof
C. plantar edge of the hoof wall
D. plantar corners of the horny capsule
9. For what hoof deformation is a horse shod on a horseshoe with a closed (iron) bottom?
A. end hoof
B. flat hoof
C. oblique hoof
G. acute hoof
10. What antiseptic solutions are best for treating puncture wounds of the sole?
A. furatsilin solution
B. hydrogen peroxide solution
C. potassium permanganate solution
D. chlorhexidine solution
11. In what species of animals is Mortellaro disease reported?
A. horses
B. pigs
C. sheep
G. cattle
12. For what orthopedic disease of cattle and horses is a special diagnostic method used - the "wedge test"?
A.podotrochleitis
B. pododermatitis C. laminitis
D. ossification of the soft cartilages
13. What anatomical structure of the distal limb in single-hoofed and artiodactyl animals is not an integral part of the shuttle block?
A. navicular bone
B. navicular bursa
C. end of the superficial digital flexor tendon
D. end of the deep digital flexor tendon
14. In which animals does inflammation of the interdigital glands occur? A. pigs
B. cattle
C. sheep
G. donkeys
15. In what species of animals is ossification of the spinal cartilages recorded?
A. cattle
B. pigs
C. horses
D. sheep
16. Which from below listed infectious diseases are leaking Withdamage to hooves and hooves?
A. salmonellosis
B.necrobacteriosis
C. foot and mouth disease
G. glanders
17. What is the function of the hoof crown?
A. hoof wall glaze production
B. production of tubular horn of the hoof wall
C. shock absorption of the hoof
D. blood supply to the hoof in motion

18. Which animals have an arrow on their sole?
A. horse
B. cow
C. pig
D. deer
19. What animals have soft cartilage:
A. horse B. cow
C. pig
D. sheep
20. What can cause a horse to develop a pointed hoof?
A. keeping livestock on soft bedding
B. keeping livestock without walking
C. injury to the spinal cartilage
D. keeping livestock on slatted reinforced concrete floors
21. What can cause the development of butt claw in cattle?
A. keeping livestock on soft bedding
B. keeping livestock without walking C. injury to the spinal cartilage
D. keeping livestock on slatted reinforced concrete floors

PC-2 ID-2 Be able to interpret and analyze data from special (instrumental) animal research methods to verify the diagnosis;
22. What causes a flat hoof in a horse?
A. breed predisposition in heavy horses
B. chronic inflammation of the base of the skin of the hoof
C. injury to the spinal cartilages
D. Cracks and fissures in the horny wall of the hoof
23. In which animals does verrucous pododermatitis occur?
A. horses
B. cows C. pigs
D. sheep
24. How is tyloma treated in cattle? A. cauterization with potassium permanganate powder
B. surgical excision
B. disarticulation of the third phalanx of the finger D. thermocauterization
25. What orthopedic horseshoe is used for horses with damage to the shuttle block?
A. a horseshoe with different widths of branches
B. a half-horseshoe
B. a horseshoe with high heel spikes D. a round horseshoe
26. What pathology is indicated by the presence of a bifurcated swelling on the dorsal side of the fetlock?
A. fetlock fracture
B. inflammation of the bursa of the common digital extensor
B. dislocation of the fetlock joint
G. inflammation of the shuttle bursa
27. What diagnostic method is used to clarify the localization of inflammation in the area of the shuttle block?
A. percussion
B. wedge test
B. conduction anesthesia of the volar nerves of the finger
D. shock test
28. What diagnostic method is used to clarify chronic sesamoiditis? A. percussion
B. wedge test
B. conduction anesthesia of the volar nerves of the finger

D. shock test

PC-2 ID-11 Know technique productions functional samples atanimals.

29. What disease can be diagnosed using trial hoof forceps?

A. ossification of the soft cartilages

B. inflammation of the shuttle block

B. chronic inflammation of the sesamoid bones

D. tyloma

30. What type of lameness is characterized by a reduction in the time of limb support and the posterior segment of the step?

A. supporting type lameness

B. hanging type lameness

C. mixed lameness

D. intermittent claudication

31. What type of lameness is characterized by a reduction in the extension of the limb forward and a reduction in the anterior segment of the step?

A. supporting type lameness

B. hanging type lameness C. mixed lameness

D. intermittent claudication

32. What type of lameness is characterized by a temporary cessation and resumption of its symptoms?

A. supporting type lameness

B. hanging type lameness C. mixed lameness

D. intermittent claudication

33. What medicine is used to treat plantar ulcers?

A. potassium permanganate powder

B. fish oil

C. tar

G. ozokerite

34. What medicine is used in the treatment of puncture wounds of the sole?

A. furacillin solution

B. hydrogen peroxide solution C. chlorhexedine solution

D. isotonic sodium chloride solution

35. What treatment method is used on the first day after a tendon sprain?

A. cold

B. heat

B. immobilizing bandage

D. massage

36. What treatment method is used for chronic tendinitis after tendon sprain?

A. cold B. warm

B. immobilizing bandage

D. massage

37. What treatment method is used for acute aseptic pododermatitis in horses?

A. cold B. warm

B. immobilizing bandage

D. massage

38. What treatment method is used for chronic aseptic pododermatitis in cattle?

A. cold B. warm

B. immobilizing bandage

D. massage

39. What treatment method is used for purulent pododermatitis in horses and cattle?

A. cold compress

B. hot compress
B. orthopedic hoof trimming and half-horseshoeing
D. hoof trimming and surgical creation of an aperture in the sole
40. What limb diseases can be indicated by the “supporting” type of lameness?
A. myositis
B. pododermatitis
B. arthritis of the hip joints
G. tendovaginitis
PC-3 “Able to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods”:
PC-3 ID-1 Be able to make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases;
41. What limb diseases can be indicated by the “hanging” type of lameness?
A. myositis
B. pododermatitis
B. arthritis of the knee joint
D. osteitis of the hip
42. What limb disease may be indicated by the “intermittent” type of claudication?
A. osteochondromatosis
B. thrombosis of the femoral artery B. fracture of the coffin bone
G. myositis
43. What is the procedure for removing spinal cartilage in horses if there are no additional surgical complications?
A. Sapozhnikova-Skvortsov B. Golensky
V. Meller-Frick G. Ivanova
44. What surgical approach is used for resection of the deep digital flexor tendon in a horse?
A. dissection of the sole along the white line B. semilunar dissection of the horny wall C. excision of the horny sole and frog D. dissection of the skin parallel to the corolla
45. How many bones does the finger of a cloven-hoofed animal consist of? A. seven
B. six C. three
G. four
46. What bones form the fetlock joint in single-hoofed animals? A. two bones
B. three bones
B. four bones D. five bones
47. What bones are involved in the formation of the coronoid joint? A. fetlock
B. shuttle B. coronal D. slate
48. Where is the axial side of the finger in artiodactyls? A. extensor surface of the finger
B. flexor surface of the finger B. inner surface of the finger
G. outer lateral surface of the finger
49. How many digital flexor tendons does a horse have? A. one
B. two B. three
G. four
50. How many digital extensor tendons does a sheep have? A. one
B. two B. three
G. four
51. How many digital flexor tendons does a cow have? A. one
B. two B. three
G. four
52. Which tendons in artiodactyls have a common tendon sheath on the dorsal surface of the finger?
A. special digital extensor tendons B. branches of the common digital extensor tendon
B. tendons of the superficial and deep digital flexors D. semitendinosus third muscle

53. On which side of the fetlock is the tendon sheath in a horse? A. dorsal
B. volar
B. medial D. lateral
54. On what parts of the horse's coffin bone are the soft cartilages strengthened? A. on the branches
B. on the sole
B. along the edges of the coronoid process D. on the toe part of the wall
PK-3 ID-4 Know techniques interpretations And analysis dataspecial (instrumental) methods for studying animals;
55. How many layers of corneum does the stratum corneum have? A. two
B. three
B. four D. five
56. The main layer of the horny capsule is called: A. tubular
B. leaflet
B. epidermal G. papillary
57. In what area of the hoof can you see the white line? A. in the area of the corolla
B. in the border area
B. in the area of the sole
D. in the area of the crumb
58. The place of transition of the scalp into the horny shoe is:
A. border
B. corolla
B. white line
D. arrow
59. Which layer of the dermis is located under the wall of the horny capsule?
A. papillary
B. leafy
B. reticulate
G. tubular
60. What is the function of the interosseous medius muscle?
A. flexes the fetlock joint of the finger
B. flexes the fetlock and coronoid joints of the finger
V. acts as a ligament of the sesamoid bones of the puta
G. acts as a ligament of the slate bones
61. The cruciate interdigital ligament in artiodactyls connects:
A. proximal portions of the fetlock bones
B. fetlock and coronoid bones
B. coronoid and claw bones
D. sesamoid and fetlock bones
62. What functions does the arrow of the hoof perform?
A. participates in the biomechanics and shock absorption of the hoof
B. prevents the limb from slipping, improves traction with the ground
B. protects the sole from squeezing and bumps
G. performs tactile function and depreciation of the limb
63. Which of the following structures are part of the shuttle block?
A. navicular bone, its suspensory ligament, mucous bursa
B. navicular bone, ligaments of the spinal cartilages and coffin bone B. shuttle bone, spinal cartilages, their cruciate ligament
D. shuttle bursa, spinal cartilages, their cruciate ligament
64. How many fingers and what kind of fingers do artiodactyl animals have?
A. 2 fingers – 3rd and 4th
B. 2 fingers – 2nd and 5th
B. 4 fingers – 2nd, 3rd, 4th, 5th D. 2 fingers – 1st and 2nd

PC-3 ID-7 Know the generally accepted criteria and classifications of animal diseases, approved lists of animal diseases.

65. What exactly is pododermatitis in single-hoofed and artiodactyl animals?
A. inflammation of the base of the skin of the hoof
B. inflammation of the soft lamellar layer of the hoof
B. inflammation of the skin in the fetlock area
D. inflammation of the shuttle block and the tendon of the deep flexor of the finger

66. What is the inward sloping top of a horseshoe called?
A. cove
B. arc
B. lapel G. bronze

67. Why is bronze used on horseshoes?
A. to prevent pressure from the horseshoe on the toe part of the sole
B. to prevent notching
B. to prevent forging
D. to prevent hoof deformities

68. What are the parts of a horseshoe where the nail tracks and holes are called?
A. branches
B. trunks C. legs D. horns

69. What is a lapel?
A. a thin plate in the toe part of the horseshoe
B. the upper part of the horseshoe beveled inward
B. lower protrusions in the heel parts of the horseshoe branches D. lower protrusions in the toe part of the horseshoe

70. What are the lower protrusions in the toe or heel parts of a horseshoe called?
A. spines
B. lapels
C. branches
G. nail heads

71. What is forging?
A. damage to an adjacent limb with the sharp edge of a horseshoe B. removal of an old horseshoe
B. trying on a new horseshoe
D. taking measurements of the hoof for making a horseshoe

72. What is a forging?
A. damage to an adjacent limb with the sharp edge of a horseshoe B. trying on a new horseshoe
B. attaching a horseshoe using horseshoe nails
D. damage to the sensitive tissue of the hoof by a horseshoe nail

73. How many stages of forging can there be?
A. two
B. three
B. four D. five

74. What is the first thing to do before shoeing a horse?
A. examination of the horse in motion and at rest
B. assessment of correct limb positioning
C. assessment of hoof balance
D. assessing the balance of old horseshoes

75. Which tool is not a forging tool?
A. trimming
B. tightness C. rasp
D. gigolo

76. What tool is intended for caring for the forge?
A. trimming

B. tightness C. rasp
D. gigolo
77. What tool is used to make a horseshoe?
A. trimming
B. tight fitting
C. hairpin D. sting
78. What is the wrap used for?
A. for cutting nail holes in the hoof wall
B. for bending nail ends into the thickness of the hoof wall
C. for punching holes in the nail tracks of a horseshoe
D. for trimming hooves
79. How is the length of the hoof measured when making the appropriate horseshoe?
A. from the middle of the toe to the plantar corner of the hoof
B. between the plantar corners of the hoof
B. from the crown of the hoof to the toe part of the wall
G. from the dorsal to the calcaneal wall of the hoof, from the lateral side
80. How is the width of the hoof measured before making the appropriate horseshoe?
A. from the middle of the toe to the plantar corner of the hoof
B. from the dorsal to the heel wall of the hoof, from the lateral side
B. from the lateral to the medial wall of the hoof from the dorsal side
D. from the lateral to the medial wall of the hoof from the sole side

PC-6 “Able to select methods of non-drug therapy, including physiotherapeutic methods for treating animals, carrying out therapeutic, including physiotherapeutic procedures with
using special equipment in compliance with safety rules":
PC-6 ID-1 Be able to use special, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its operation;
81. How often is work horses shoeed under standard operating, housing and feeding conditions?
A. every 3 weeks
B. every 4 weeks
C. every 6 weeks
D. every 10 weeks
82. For what disease is the orthopedic wooden block “Demotek” used?
A. Mortellaro disease
B. Rusterholtz's ulcer B. tiloma
G. laminitis
83. How is coronary phlegmon treated in cattle?
A. by dissecting the phlegmon and washing its cavity with antiseptics
B. by creating notches and counter-apertures in a checkerboard pattern
B. disarticulation of the third phalanx of the finger
G. puncture of the phlegmon cavity with rinsing with 0.5% novocaine with an antibiotic
84. How many stages of purulent arthritis of the coffin joint are there?
A. three
B. four
C. five
D. six
85. In which animals is inflammation of the shuttle bursa observed more often than in others?
A. horses
B. cattle
C. sheep
G. pigs
86. What surgical operation is performed for purulent inflammation of the navicular bursa in a

horse?
A. excision of the base of the frog and resection of the deep digital flexor tendon
B. arthrocentesis of the dorsal recess of the coffin joint
B. upper arthrotomy of the coffin joint
D. surgical dissection at the site of fluctuating swelling
87. Where is the forge nest located?
A. next to the forge
B. next to the anvil
C. inside the mouth of the forge
D. inside the coal storage box
PC-6 ID-2 Be able to fix animals For provisionsafety during treatment procedures;
88. How can you quickly lower the combustion temperature of coals?
A. wetting with cold water
B. closing the damper in the chimney
C. stopping air injection
D. ventilate the furnace room
89. What is the purpose of a lapel on a horseshoe? A. to grip the horseshoe with the ground
B. for fastening the horseshoe to the sole
B. to prevent the horseshoe from moving during movement
D. to prevent compression of the sole
90. Where does hoof trimming begin?
A. from the arrow
B. from the sole
B. from the turning corners
D. from the wall
91. How many work areas are there in the forge?
A. two
B. three
B. four
D. five
92. What is the name of the main working part of the anvil?
A. face
B. tail C. horn D. leg
93. What is the name of the thick-walled cast iron pipe inserted into the forge socket?
A. tuyere
B. gigolo
B. chimney
D. duct
94. What is the forge tool used for?
A. for placing coal
B. for cleaning the tuyere and forge nest from scale
C. for extinguishing fire at the end of work
G. for leveling coal

PC-6 ID-3 Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies;
95. What should the diameter of the forge nest be?
A. 20-30 cm
B. 10-15 cm
H. 50-60 cm
D. 60-70 cm

96. What should be the length of the dorsal horny wall of the cow's claw, which is taken into account when trimming and trimming?
A. 5 cm
B. 7.5 cm
H. 10 cm
D. 12 cm
97. How is the mediolateral balance of a horse's hoof assessed before shoeing?
A. along the dorsal axis of the finger
B. along the lateral axis of the finger
B. focusing on the width of the limbs position
D. according to the ratio of the axis of the scapula and finger
98. What tool is used to punch nail holes all the way through a horseshoe? A. hairpin
B. punch hammer C. road hammer D. chisel
99. What can cause the development of aseptic pododermatitis?
A. straight forging
B. naminka C. unforging
G. maceration of the horn of the sole

PC-6 ID-4 Know the types of non-drug therapy, including physiotherapy, used in veterinary medicine, and indications for their use;
100. What can cause the development of purulent pododermatitis?
A. straight forging
B. naminka C. unforging
G. maceration of the horn of the sole
101. What is the separation of the horny wall of the hoof in the direction of the horny tubes called?
A. cleft
B. crack
C. fracture
D. aperture
102. What is the separation of the hoof wall in a transverse or oblique direction to the horn tubes called?
A. cleft
B. crack
C. fracture
D. aperture
103. What is a hoof warm-up? A. presence of an empty hoof wall
B. bruise of the sole
B. maceration of the sole
D. excessive regrowth of the sole horn
104. What is a “horny column”?
A. hoof deformation
B. roller-like thickening in the leaf horn
C. new formation of the crumb
D. a type of verrucous pododermatitis
105. What causes the development of a “horny column” in the hoof?
A. chronic aseptic pododermatitis
B. prolonged physical inactivity
B. penetrating wounds at the base of the frog
D. metabolic disorder

PC-6 ID-6 Know the methods and techniques of non-drug effects on the animal body;
106. What kind of horseshoe is used for horses with navicular bone fractures? A. round

B. three-quarter
C. half horseshoe
G. horseshoe with high heel spikes
107. Which medicine allows you to achieve the best result in the treatment of sheep with foot rot?
A. bicillin
B. cefazolin
B. amoxicillin
G. terramycin
108. At what time of year is the spread of necrobacteriosis in reindeer recorded?
A. winter B. spring C. summer D. autumn
109. In what infectious disease in artiodactyls, along with damage to the skin of the interungulate cleft and hooves, do aphthae of the mucous membranes of the oral cavity appear?
A. necrobacteriosis
B. foot rot
C. foot and mouth disease
G. anthrax
110. What hoof structure is affected by rheumatic inflammation?
A. the base of the hoof skin
B. shuttle block
B. coffin joint
D. lamellar layer of the base of the skin
PC-6 ID-7 Know methods of restraining animals during their treatment;
111. What diagnostic method is used for ossification of the spinal cartilages?
A. wedge test
B. trial forceps
C. percussion
G. palpation
112. What part of the hoof is affected by verrucous pododermatitis?
A. base of the skin
B. laminar layer
B. coronary sulcus
G. digital crumb and arrow
113. What disease that spreads to the area of the puta is also called “warty biting midge”?
A. eczema
B. pyoderma
B. verrucous pododermatitis
G. furunculosis
114. What is the characteristic feature of the course of specific Rusterholtz ulcer in cattle?
A. affects the skin of the interclaw gap
B. affects the tissue of the corolla
V. most often affects the corolla of the medial claw
G. affects the sole, most often the lateral claw
115. What method of diagnosing laminitis is the most reliable?
A. examining the horse in motion and at rest
B. use of trial forceps
B. anesthesia of the volar nerves of the finger
D. X-ray diagnostics

PC-6 ID-8 Know the forms and rules for filling out a journal for registering sick animals and animal medical history in accordance with the requirements of veterinary records, including in digital format
116. For which disease is radiopaque venography of the hoof widely used?
A. laminitis

B. cancer arrows
V. phlegmon of the corolla
D. ossification of the soft cartilages
117. Which deformity may worsen before a full hoof develops?
A. flat hoof
B. crooked hoof C. slanted hoof
G. obtuse hoof
118. What deformity, under certain conditions, worsens before the development of a butt hoof?
A. obtuse hoof
B. flat hoof
B. hedgehog hoof D. oblique hoof
119. What hoof deformation develops with wide or narrow limb placement?
A. flat hoof
B. crooked hoof
C. oblique hoof
G. obtuse hoof
120. What hoof deformation is not amenable to orthopedic correction and leads to the culling of the animal?
A. pointed hoof
B. oblique hoof
B. compressed hoof in the heel parts D. butt hoof

4.1.5. Typical tasks for intermediate certification

4.1.5.1. List of questions for testing

PC-2 "Able to develop animal research programs and conduct clinical studies of animals using special (instrumental) and laboratory methods, including to clarify the diagnosis":
PC-2 ID-1 Be able to study animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography;

1. Anatomy of a finger in single-hoofed animals.
2. Biomechanics of the limb in single-hoofed animals.
3. Anatomy of fingers in artiodactyls.
4. Biomechanics of the limb in artiodactyl animals.
5. A special diagnostic method for diseases of the shuttle block.
6. X-ray contrast venography of hooves for laminitis in horses.
7. Methods for studying diseases of the soft cartilages.

PC-2 ID-2 Be able to interpret and analyze data from special (instrumental) animal research methods to verify the diagnosis;

8. Diagnosis of hoof diseases using novocaine blockades.
9. Orthopedic examination of the animal.
10. Types and degrees of lameness in animals.

PC-2 ID-11 Know the technique of performing functional tests in animals.

11. Application of the wedge test in horses
12. Using trial hoof mites
13. Anesthesia of the volar nerves of the finger
14. Additional research methods (x-ray diagnostics, ultrasound)

PC-3 "Able to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods":
PC-3 ID-1 Be able to make a diagnosis in accordance with generally accepted criteria and

classifications, lists of animal diseases;

15. How should the forge be located in relation to other buildings?
16. What fire safety measures must be observed in a forge.
17. What premises does the production and training forge consist of?
18. What tools are used to make horseshoes.
19. What is the purpose of horseshoes.
20. Which horseshoe is called smooth and why.
21. What grade of steel is used to make horseshoes?

PC-3 ID-4 Know the methods of interpretation and analysis of data from special (instrumental) methods of animal research;

22. How to determine the quality of a horseshoe nail.
23. List the stages of making a smooth horseshoe.
24. Why is a bevel made along the edge of a horseshoe?

PC-3 ID-7 Know generally accepted criteria And classifications diseasesanimals, approved lists of animal diseases.

25. What is the purpose of the lapel?
26. What sizes of factory horseshoes are there?
27. Types of spikes and their purpose.
28. What are the numbers of horseshoe nails?

PC-6 “Able to select methods of non-drug therapy, including physiotherapeutic methods for treating animals, conducting therapeutic, including physiotherapeutic procedures using special equipment in compliance with safety rules”:

PC-6 ID-1 Be able to use special, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its operation;

29. Where is the forge nest located and what are its dimensions.
30. How the tuyere works and what is its purpose.
31. At what distance from the forge is the anvil installed?
32. How to determine the height of the anvil above the floor level depending on the height of the blacksmith.
33. How to determine the quality of hardening of the steel of the front part of the anvil.
34. List blacksmith tools.
35. Why is blacksmith's coal moistened with water?
36. What are the degrees of metal heating?

PC-6 ID-2 Be able to restrain animals to ensure safety during treatment procedures;

37. Requirements for a shoeing arena
38. How to properly measure a hoof
39. Rules for trimming hooves of cattle and horses
40. Organization of the farriery department on farms and hoof care.

PC-6 ID-3 Be able to maintain accounting and reporting documentation on diseases and treatment of animals using digital technologies;

41. List the stages of shoeing a horse.
42. List the parameters of a properly fitted horseshoe.
43. Why you shouldn't use a screwdriver when driving horseshoe nails
44. How are the thoracic and pelvic limbs fixed during shoeing?

PC-6 ID-4 Know kinds non-drug therapy, therapy v volume numberphysiotherapy used in veterinary medicine and indications for their use;

45. Hoof deformation in horses (compressed, obtuse, oblique).
46. Hoof deformation (flat, convex, crooked).
47. Shoeing cattle.
48. Puncture wounds of the sole and digital crumb, complications with them.
49. Purulent arthritis of the claw joint in cattle.

PC-6 ID-6 Know the methods and techniques of non-drug effects on the animal body;

50. Limax (tiloma).
51. Rheumatic inflammation of the hooves (laminitis).
52. Mortellaro's disease.
53. Cellulitis of the corolla.
54. Ulcers of the sole.

PC-6 ID-7 Know methods of restraining animals during their treatment;

55. Pododermatitis.
56. Ossification of the soft cartilage.
57. Necrosis of the deep digital flexor tendons.
58. Chronic verrucous pododermatitis (arrow cancer).
59. Rusterholtz's ulcer.

PC-6 ID-8 Know the forms and rules for filling out a journal for registering sick animals and animal medical history in accordance with the requirements of veterinary records, including in digital format.

60. Damage to the hooves due to foot and mouth disease.
61. Damage to the hooves due to necrobacteriosis.
62. Purulent inflammation of the shuttle bursa.
63. Necrosis of the soft cartilages.
64. Treatment methods for cracked and split hooves in horses.
65. Operations in the area of the fingers in artiodactyl animals.
66. Operations in the toe area in single-hoofed animals.

5. METHODOLOGICAL MATERIALS DETERMINING PROCEDURES FOR ASSESSING KNOWLEDGE, ABILITIES AND SKILLS, AND ACTIVITY EXPERIENCE CHARACTERIZING THE STAGES OF COMPETENCY FORMATION

Criteria for assessing students' knowledge during the colloquium:

- **Mark "excellent"**- the student clearly expresses his point of view on the issues under consideration, giving relevant examples.
- **Mark "good"**- the student makes some errors in the answer
- **Mark "satisfactory"**- the student discovers gaps in knowledge of the basic educational and regulatory material.
- **Mark "unsatisfactory"**- the student discovers significant gaps in knowledge of the basic principles of the discipline, and the inability, with the help of the teacher, to obtain the correct solution to a specific practical problem.

Criteria for assessing students' knowledge during testing:

Result testing is assessed By interest scale assessments.
To eachThe student is offered a set of test tasks consisting of 25 questions:

- **Mark "excellent"**– 25-22 correct answers.
- **Mark "good"**– 21-18 correct answers.
- **Mark "satisfactory"**– 17-13 correct answers.
- **Mark "unsatisfactory"**– less than 13 correct answers

Criteria for assessing students' knowledge when checking test papers:

- **Mark "excellent"**- the problem is identified and its relevance is justified; an analysis of various points of view on the problem under consideration was made and one's own position was logically stated; conclusions are formulated, the topic is fully disclosed, the scope is maintained; requirements for external design have been met, basic requirements for the abstract have been met

• **Mark "good"**- there were shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical consistency in judgments; the volume of the abstract is not maintained; there are omissions in the design, there are significant deviations from the requirements for abstracting.
• **Mark "satisfactory"**- the topic is only partially covered; there were factual errors in the content of the abstract; there are no conclusions, the topic of the abstract is not disclosed
• **Mark "unsatisfactory"**- there is a significant misunderstanding of the problem or the abstract is not presented at all.

Knowledge criteria for the test:

• **Grade "passed"**must meet the parameters of any of the positive ratings (“excellent”, “good”, “satisfactory”).
• **Grade "Not accepted"** must correspond parameters estimates "unsatisfactory"
• **Mark "excellent"**– all types of educational work provided for by the curriculum have been completed. The student demonstrates the correspondence of knowledge, skills and abilities to the indicators given in the tables, operates with acquired knowledge, skills and abilities, and applies them in situations of increased complexity. In this case, inaccuracies and difficulties may occur during analytical operations and the transfer of knowledge and skills to new, non-standard situations.
• **Mark "good"**– all types of educational work provided for by the curriculum have been completed. The student demonstrates the correspondence of knowledge, skills and abilities to the indicators given in the tables, operates with acquired knowledge, skills and abilities, and applies them in standard situations. In this case, minor errors, inaccuracies, and difficulties during analytical operations and the transfer of knowledge and skills to new, non-standard situations may be made.
• **Mark "satisfactory"**– one or more types of educational work provided for by the curriculum have not been completed. The student demonstrates incomplete compliance of knowledge, abilities, skills with the indicators given in the tables, significant mistakes are made, a partial lack of knowledge, abilities, and skills is manifested in a number of indicators, the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations. –
• **Mark "unsatisfactory"**– the types of educational work provided for by the curriculum have not been completed. demonstrates incomplete compliance of knowledge, abilities, and skills with those given in the tables of indicators, significant errors are made, a lack of knowledge, abilities, and skills is manifested in a larger number of indicators; the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations

6. ACCESSIBILITY AND QUALITY OF EDUCATION FOR PERSONS WITH DISABILITIES

If necessary, disabled people and persons with limited health capabilities are given additional time to prepare an answer for the test.

When carrying out the procedure for assessing the learning outcomes of people with disabilities and people with limited health capabilities, their own technical means may be used.

The procedure for assessing the learning outcomes of people with disabilities and people with limited health capabilities in the discipline provides for the provision of information in forms adapted to the limitations of their health and perception of information:

For people with visual impairments:	– in printed form in enlarged font, – in the form of an electronic document.
For people with hearing impairments:	– in printed form, – in the form of an electronic document.
For persons with musculoskeletal disorders	– in printed form, apparatus: – in the form of an electronic document.

When carrying out the procedure for assessing the learning outcomes of disabled people and persons with limited health capabilities in the discipline, ensures compliance

the following additional requirements depending on the individual characteristics of the students:

a) instructions on the procedure for conducting the assessment procedure are provided in an accessible form (orally, in writing);

b) an accessible form for submitting assignments of assessment tools (in printed form, in printed form in enlarged font, in the form of an electronic document, assignments are read out by the teacher);

c) an accessible form of providing answers to assignments (written on paper, typing answers on a computer, orally).

If necessary, for students with disabilities and people with disabilities, the procedure for assessing learning outcomes in the discipline can be carried out in several stages.

The procedure for assessing the learning outcomes of disabled people and persons with limited health capabilities is permitted using distance learning technologies.