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 A.A.
May 6, 2024

Department of General, Private and Operative surgery

EDUCATIONAL WORK PROGRAM

for the discipline

" OPHTHALMOLOGY"

The level of higher education
SPECIALIST COURSE

Specialty 36.05.01 Veterinary Medicine
Full-time education
Education starts in 2024

Reviewed and adopted
at the meeting of the department
on May 2, 2024.
Protocol No. 9

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

Saint Petersburg
2024

1. GOALS AND OBJECTIVES OF THE DISCIPLINE

The main goal of the discipline "OPHTHALMOLOGY" in the training of veterinarians is to give students theoretical knowledge, practical skills and skills in the prevention, diagnosis and treatment of the most common eye diseases.

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

1. Study the anatomical and physiological features and functions of various parts of the organ of vision; to form an idea of the meaning, anatomical and physiological features of the eye.

2. To teach students the basic methods of examining the organ of vision, to teach them to diagnose, treat and prevent the most common diseases of the organ of vision.

3. To acquaint students with the etiology and pathogenesis of common ophthalmological diseases in animals, teach them the differential diagnosis of eye diseases.

4. Introduce indications for surgical treatment and principles of surgery.

5. To study the clinical picture of damage to the organs of vision.

6. To introduce methods of diagnosis and treatment of dystrophic eye diseases, as well as primary and secondary tumors of the organ of vision.

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 of activities, in accordance with the educational standard of the Federal State Educational Standard for Higher Education 36.05.01
"Veterinary medicine".
Area of professional activity:
13Agriculture

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):
Type of tasks prof. activity: medical
PC-2 Development of an animal research program and conducting clinical research of animals using special (instrumental) and laboratory methods, including to clarify the diagnosis
PC-2ID-1 Be able to study animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography
PC-2ID-2 Be able to interpret and analyze data from special (instrumental) animal research methods to verify the diagnosis

PC-2ID-9 Know the technique of conducting animal research using digital equipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals

PC-3 Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods

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-6 Know the etiology and pathogenesis of animal diseases of various species

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

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

PC-6ID-2 Be able to restrain animals to ensure safety during medicinal 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-7 Know methods of restraining animals during their treatment

PC-6ID-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 accounting, including in digital format

PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plananimals (if necessary) based on the results of assessing the effectiveness of treatment

PC-10 ID-1 Be able to evaluate the effectiveness of treatment

PC-10 ID-2 Be able to use specialized information databases when choosing methods for treating animal diseases

PC-10 ID-3 Know methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals

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

Discipline B.1.V.DV.01.02 "Ophthalmology" refers to the elective disciplines of the federal state educational standard of higher education in specialty 36.05.01 "Veterinary Medicine" (specialty level) module 1.

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 "Ophthalmology" is preceded by the study of the following disciplines: anatomy, pathological anatomy, clinical diagnostics, internal non-communicable diseases, clinical pharmacology.

4. SCOPE OF THE DISCIPLINE "OPHTHALMOLOGY"

4.1. Scope of the discipline "Ophthalmology" for full-time study

Type of educational work	Total hours	Semesters
		9
Classroom lessons (total)	**32**	**32**
Including:		
Lectures, including interactive forms	16	16
Practical exercises (PP), includingincluding interactive forms, including:	16	16
practical training (PT)	4	4
Independent work (total)	**40**	**40**
Type of intermediate certification (test, exam)	**Test**	**Test**
Total labor intensityhours/credits	**72/2**	**72/2**

5. CONTENT OF THE DISCIPLINE "OPHTHALMOLOGY"

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

No.	Name	Formed competencies	Semester	Types of educational work,including independent student work and labor intensity (in hours)			
				L	PP	PT	IW

1.	**Section 1. Introduction to veterinary ophthalmology.** Anatomical and topographic data of the organ of vision in animals. Specific features of the structureeyes. Physiology of the organ of vision.	**PC-2 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_{ID-1}Be able to conduct animal research using digital equipment 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)animal research methods for diagnosis verification PC-2_{ID-9}Know the technique of conducting animal research using digitalequipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals **PC-3 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 with generally acceptedcriteria and classifications, lists of animal diseases PC-3_{ID-4}Know the methods of interpretation and analysis of special (instrumental) dataanimal research methods PC-3_{ID-6}Know the etiology and pathogenesis of animal diseases of various species PC-3_{ID-7}Know the generally accepted criteria and classifications of animal diseases, approvedlists of animal diseases **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}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 duringmedicinal procedures PC-6_{ID-3}Be able to maintain accounting and reporting documentation on diseases and treatment of animals withusing digital technologies PC-6_{ID-7}Know the methods of restraining animals during their treatment PC-6_{ID-8}Know the forms and rules for filling out a logbook for registering sick animals andanimal medical history in accordance with veterinary registration requirements, including in digital format **PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment** PC-10_{ID-1}Be able to evaluate the effectiveness of treatment PC-10_{ID-2}Be able to use specialized information databases whenchoosing methods for treating animal diseases PC-10_{ID-3}Know the methods of drug treatment of sick animals and indications for themuse in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	9	2	2	-	5

2.	**Section 2. Methods for studying the organ of vision.** Definition of visualcapabilities. Instrumental methods of eye examination. In the clinic, mastering eye examination methods.	**PC-2 Development of an animal research program and conducting clinical research of animals using special (instrumental) and laboratory methods, including for clarification diagnosis** 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 interpret and analyze special data(instrumental)animal research methods for diagnosis verification PC-2_{ID-9}Know the technique of conducting animal research using digitalequipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals **PC-3 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 with generally acceptedcriteria and classifications, lists of animal diseases PC-3_{ID-4}Know the methods of interpretation and analysis of special (instrumental) dataanimal research methods PC-3_{ID-6}Know the etiology and pathogenesis of animal diseases of various species PC-3_{ID-7}Know the generally accepted criteria and classifications of animal diseases. approvedlists of animal diseases **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}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 duringmedicinal procedures PC-6_{ID-3}Be able to maintain accounting and reporting documentation on diseases and treatment of animals withusing digital technologies PC-6_{ID-7}Know the methods of restraining animals during their treatment PC-6_{ID-8}Know the forms and rules for filling out a logbook for registering sick animals andanimal medical history in accordance with veterinary registration requirements, including in digital format **PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment** PC-10_{ID-1}Be able to evaluate the effectiveness of treatment PC-10_{ID-2}Be able to use specialized information databases whenchoosing methods for treating animal diseases PC-10_{ID-3}Know the methods of drug treatment of sick animals and indications for themuse in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	9	2	2	4	5

3.	**Section 3. Bacterialdamage to the organ of vision.** Injuries to the organ of vision. Infectious diseases of the eyelids, conjunctiva, membranes of the eye.	**PC-2 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_{ID-1}Be able to conduct animal research using digital equipment 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)animal research methods for diagnosis verification PC-2_{ID-9}Know the technique of conducting animal research using digitalequipment and special (instrumental) methods in accordance with guidelines. instructions, rules for diagnosis. prevention and treatment of animals **PC-3 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 with generally acceptedcriteria and classifications, lists of animal diseases PC-3_{ID-4}Know the methods of interpretation and analysis of special (instrumental) dataanimal research methods PC-3_{ID-6}Know the etiology and pathogenesis of animal diseases of various species PC-3_{ID-7}Know the generally accepted criteria and classifications of animal diseases. approvedlists of animal diseases **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}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 duringmedicinal procedures PC-6_{ID-3}Be able to maintain accounting and reporting documentation on diseases and treatment of animals withusing digital technologies 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 logbook for registering sick animals andanimal medical history in accordance with veterinary registration requirements, including in digital format **PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment** PC-10_{ID-1}Be able to evaluate the effectiveness of treatment PC-10_{ID-2}Be able to use specialized information databases whenchoosing methods for treating animal diseases PC-10_{ID-3}Know the methods of drug treatment of sick animals and indications for themuse in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	9	4	2	-	10

4.	**Section 4. Allergic and specific diseases organ of vision**. Specific keratitis, toxoplasmosis uveitis, viral keratitis, conjunctivitis.	**PC-2 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_{ID-1}Be able to conduct animal research using digital equipment 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)animal research methods for diagnosis verification PC-2_{ID-9}Know the technique of conducting animal research using digitalequipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals **PC-3 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 with generally acceptedcriteria and classifications, lists of animal diseases PC-3_{ID-4}Know the methods of interpretation and analysis of special (instrumental) dataanimal research methods PC-3_{ID-6}Know the etiology and pathogenesis of animal diseases of various species PC-3_{ID-7}Know the generally accepted criteria and classifications of animal diseases, approvedlists of animal diseases **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}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 duringmedicinal procedures PC-6_{ID-3}Be able to maintain accounting and reporting documentation on diseases and treatment of animals withusing digital technologies PC-6_{ID-7}Know the methods of restraining animals during their treatment PC-6_{ID-8}Know the forms and rules for filling out a logbook for registering sick animals andanimal medical history in accordance with veterinary registration requirements, including in digital format **PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment** PC-10_{ID-1}Be able to evaluate the effectiveness of treatment PC-10_{ID-2}Be able to use specialized information databases whenchoosing methods for treating animal diseases PC-10_{ID-3}Know the methods of drug treatment of sick animals and indications for themuse in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	9	4	2	-	10

5.	**Section 5. Eye pathology in kidney diseases, endocrine pathology. Ophthalmo-oncology.**	**PC-2 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-2ID-1 Be able to study animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography PC-2ID-2 Be able to interpret and analyze data from special (instrumental) animal research methods to verify the diagnosis PC-2ID-9 Know the technique of conducting animal research using digital equipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals **PC-3 Diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods** 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-6 Know the etiologyand pathogenesis of animal diseases of various species PC-3ID-7 Know generally accepted criteria and classifications of animal diseases, approved lists of animal diseases **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-6ID-1 Be able to use special, including digital equipment, when carrying out medical, including physiotherapeutic procedures in accordance with the instructions for its operation 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-7 Know the methods of fixing animals duringtheir treatment PC-6ID-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 registration, including in digital format **PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment** PC-10ID-1 Be able to assess the effectiveness of treatment PC-10ID-2 Be able to use specialized information databases when choosing methods for treating animal diseases PC-10ID-3 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	9	4	4	-	10
		TOTAL FOR SEMESTER 9		16	12	4	40

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

6.1. Guidelines for independent work

1. Novocaine therapy in veterinary medicine: a manual for full-time, part-time veterinary faculty students and FPC students / comp. A.A. Stekolnikov, M.D. Spinu, O.V. Kukina; SPbGAVM. – St. Petersburg: Publishing house SPbGAVM, 2008. - 59 p.

2. Ophthalmology. Special methods of research in animals: methodological instructions / E.V. Prudnikova, A.A. Stekolnikov, M.A. Narusbaeva, E.V. Titova; Ministry of Agriculture of the Russian Federation, St. Petersburg State University of Mechanics and Mathematics. - St. Petersburg: Publishing house of St. Petersburg State University of Mathematics and Mathematics, 2021. - 31 p. -
URL:https://clck.ru/emCHS (date of access: 04/27/24).- Access mode: for authorization of users of the SPbSUVM EB.

6.2. Literature for independent work

1. Stekolnikov A.A. Veterinary surgery, orthopedics and ophthalmology: textbook / A.A. Stekolnikov, B.S. Semenov. - St. Petersburg: Quadro, 2016. - 400 p. -
URL:http://www.iprbookshop.ru/60198.html (date of access: 04/27/24). - Access mode: for authorization of users of the EBS "IPR BOOKS".

2. Shakurov, M.Sh. Fundamentals of general veterinary surgery: textbook; add. UMO / M.Sh. Shakurov. – St. Petersburg: Lan, 2011. - 252 p.

3. Workshop on private surgery: textbook / B.S. Semenov, A.A. Stekolnikov, O.K. Suhovolsky, E.I. Veremey; under general ed. B.S. Semenov and A.A. Stekolnikov. – St. Petersburg: Lan, 2013. - 352 p.

4. Kopenkin, E.P. Eye Diseases of Small Animals: A Study Guide foruniversity students studying in specialty 110800 "Veterinary Medicine" / E.P. Kopenkin, L.F. Sotnikova. - Moscow: Scientific Partnership. ed. KMK, 2008. - 186 p.

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

a) basic literature:

1. Stekolnikov, A.A. Veterinary ophthalmology: textbook: rec. Feder. UMO / A.A.Stekolnikov, L.F. Sotnikova. - St. Petersburg: Prospekt Nauki, 2020. - 296 p. -
URL:https://www.prospektnauki.ru/ebooks/books/vetoft.php (date of access: 04/27/2024). - Access mode: for authorization. users of the EBS "Prospekt Nauki".

2. General surgery of veterinary medicine: textbook / E.I. Veremey, A.A. Stekolnikov, B.S. Semenov [and others]; edited by A.A. Stekolnikova, E.I. Veremey. - Saint Petersburg: Quadro, 2016. - 600 p. - URL:http://www.iprbookshop.ru/60232.html (access date: 04/27/24). - Access mode: for authorization of users of the EBS "IPR BOOKS".

3. Shakurov, M. Sh. Fundamentals of general veterinary surgery: a textbook / Shakurov Mukhametfatikh Shakurovich. - 3rd ed., erased. - St. Petersburg: Lan, 2020. - 252 p. -

URL:https://e.lanbook.com/book/143118 (date of access 04/27/24). - Access mode: for authorization of users of the Lan EBS.

3. Workshop on private surgery: textbook / A. A. Stekolnikov, B. S. Semenov, O. K. Suhovolsky, E. I. Veremey. - St. Petersburg: Lan, 2021. - 352 p. -URL: https://e.lanbook.com/book/168602 (date of access: 04/27/2024). - Access mode: for authorization of users of the Lan EBS.

b) additional literature:

1. Workshop on general and private veterinary surgery: a textbook for university students specializing in "Veterinary Medicine" / A.V. Lebedev [etc.]; edited by B.S. Semenov. - Moscow: Kolos, 2000. - 536 p. : ill.

2. Private veterinary surgery: a textbook for universities / B.S. Semenov [and others]; edited by B.S. Semenov and A.V. Lebedeva. - 2nd ed. - Moscow: Kolos S, 2003. - 496 p.: ill.

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

To prepare for practical classes and perform independent work, students can use the following Internet resources:

1. https://meduniver.com – Medical information site.
2. http://operabelno.ru – Main surgical portal.

Electronic library systems:

1. EBS "SPbGUVM"
2. EBS "Publishing house "Lan"
3. EBS "Student Consultant"
4. Legal reference system "ConsultantPlus"
5. University information system "RUSSIA"
6. Scientific electronic library ELIBRARY.RU
7. Database of international science citation indexes Web of Science
8. Electronic books from the publishing house "Prospekt Nauki"
9. Collection "Agriculture. Veterinary" publishing house "Kvadro"

9. METHODOLOGICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE

Methodological recommendations for students are a set of recommendations andexplanations 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 for study 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, and highlight the main ideas. 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 must put off most of the above-mentioned work 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 taking notes 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 the main ideas, noteissues that require additional processing, in particular, consultation with the teacher. When working on the text of a lecture, a student needs to pay special attention to the problematic questions posed by the teacher during the lecture, as well as 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 Read 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, belong to the methodological documents defining 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 (seminar) classes perform the following tasks:

- stimulate regular studying recommended literature, A Alsoattentive attention to the lecture course;
- secure knowledge, received V process lecture training And independent work on literature;
- expand the scope of professionally significant knowledge, skills and abilities;
- allow you to check the correctness of previously acquired knowledge;
- instill skills of independent thinking and oral presentation;
- promote 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 economic conditions, currentregulatory documents, advanced technologies, on the latest achievements of science, technology and practice, on modern ideas about certain phenomena, 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, we can limit ourselves 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 the abbreviated name of the question to which the extract relate sor quote. 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 –

title of the journal, 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 first lifenecessity, the highest value and the main way to achieve success in life, to realize 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 use of information technology:

✓ conducting practical classes 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 V Electronic information and educational environmentSPbGUVM: https://spbguvm.ru/academy/eios

11.2. Software

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

N o.p /p	Name of technical and technical programs recommended by sections and topics computer teaching aids	License
1	MS PowerPoint	67580828
2	LibreOffice	free software
3	OS Alt Education 8	AAO.0022.00
4	ABIS "MARK-SQL"	02102014155
5	MS Windows 10	67580828
6	System ConsultantPlus	503/KL
7	Android OS	free software

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

Namediscipline (module), practice **VAccording to curriculum**	**Namespecialrooms and rooms for independent work**	**Equipping special rooms and rooms for independent work**
Ophthalmology	101 (196084, St. Petersburg, st. Chernigovskaya, house 5) Educational classroom for classes seminar type, group and individual consultations, current control intermediate certification	*Specialized furniture:* desks, chairs, educational board, *Visual benefits And educational materials:* posters By ophthalmology
	104 (196084, St. Petersburg, Chernigovskaya st., building 5) Educational classroom for classes seminar type, group and individual consultations, consultations current control And intermediate certification	*Specialized furniture:* desks, chairs, blackboard. *Technical training aids:* multimedia projector, screen, laptop. *Visual benefits And educational materials:* posters By ophthalmology
	105 (196084, St. Petersburg, Chernigovskaya st., building 5) Educational audiencefor conducting classes seminar type, group and individual consultations, current control And intermediate certification	*Specialized furniture:* desks, chairs, blackboard. *Visual benefits And educational materials:* posters By ophthalmology
	122 (196084, St. Petersburg, Chernigovskaya st., building 5) Educational classroom for classes seminar type, group and individual consultations, consultations current control And intermediate certification	*Specialized furniture:* desks, chairs, blackboard. *Visual benefits And educational materials:*bone, muscle, tendon-ligament preparations; ophthalmology posters.

	124 (196084, St. Petersburg, st. Chernigovskaya, house 5) Educational classroom for classes seminar type, group and individual consultations, consultations current controlAnd intermediate certification	*Specialized furniture:* desks, chairs, blackboard. *Visual benefits And educational materials:* posters By ophthalmology

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

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

" OPHTHALMOLOGY "

Level of higher education
SPECIALIST COURSE

Specialty 05.36.01 Veterinary medicine
Full-time education.

Education starts in 2024.

Saint Petersburg
2024

1. PASSPORT OF THE ASSESSMENT FUND

Table 1

No.	Formed competencies	Controlled sections (topics) disciplines	Evaluation tool
1.	**Professional competencies (PC):** **PC-2 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-2ID-1Be able to conduct animal research using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography PC-2ID-2Be able to interpret and analyze special data(instrumental)animal research methods for diagnosis verification PC-2ID-9Know the technique of conducting animal research using digitalequipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals **PC-3 Diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods** PC-3ID-1Be able to make a diagnosis in accordance with generally acceptedcriteria and classifications, lists of animal diseases PC-3ID-4Know the methods of interpretation and analysis of special (instrumental) dataanimal research methods PC-3ID-6Know the etiology and pathogenesis of animal diseases of various species PC-3ID-7Know the generally accepted criteria and classifications of animal diseases, approvedlists of animal diseases **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-6ID-1Be able to use special equipment, including digital equipment, whencarrying out medical, including physiotherapeutic procedures in accordance with the instructions for its use PC-6ID-2Be able to restrain animals to ensure safety during medicinal procedures PC-6ID-3Be able to maintain accounting and reporting documentation on diseases and treatment of animals withusing digital technologies PC-6ID-7Know the methods of restraining animals during their treatment PC-6ID-8Know the forms and rules for filling out a logbook for registering sick animals andanimal medical history in accordance with veterinary registration requirements, including in digital format **PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment** PC-10ID-1Be able to evaluate the effectiveness of treatment PC-10ID-2Be able to use specialized information databases whenchoosing methods for treating animal diseases PC-10ID-3Know the methods of drug treatment of sick animals and indications for themuse in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	**Section 1. Introduction to veterinary ophthalmology.** Anatomical and topographic data of the organ of vision in animals. Species structural features of the eye. Physiology of the organ of vision.	Colloquium, tests
2.		**Section 2. Methods for studying the organ of vision.** Determination of visual ability. Instrumental methods of eye examination.	Tests
3.		**Section 3. Bacterial lesions of the organ of vision.** Injuries to the organ of vision. Infectious diseases of the eyelids, conjunctiva, membranes of the eye.	Tests
4.		**Section 4. Allergic and specific diseases of the organ of vision.** Specific keratitis, toxoplasmosis uveitis, viral keratitis, Conjunctivitis.	Tests
		Section 5. Eye pathology in kidney diseases, endocrine pathology. Ophthalmo-oncology	Tests

Approximate list of assessment tools

table 2

No.	Name evaluativ efacilities	Brief description of the evaluation facilities	Performance assessment 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 teacher with teaching	Questions on topics/sections of the discipline
2.	Test	A system of standardized tasks that allows you to automate the procedure measuring the level of knowledge and skills of the student	Test task fund

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

Table 3

Planned resultsmastering competence	Mastery level				Evaluation tool
	unsatisfactory	satisfactorily	Fine	Great	
PC-2 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$_{ID-1}$ Be able to produce study animals With with help digital equipment and using special (instrumental) methods, including endoscopy, sensing, catheterization, radiography, electrocardiography, echography	When deciding standard no tasks basic skills demonstrated, hadplace rude errors	Demonstrated basic skills, solved typical tasks with not rude mistakes, all completed tasks, but not in in full	All the main ones are demonstrated 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-2$_{ID-2}$ Be able to realize data interpretation and analysis special (instrumental) methods research animals to verify the diagnosis	Knowledge level below minimum requirements, had placerude errors	Minimum acceptable knowledge level, a lot was allowed minor mistakes	The level of knowledge corresponds to the training program, several minor mistakes were made	Demonstratedskills at solving non-standard problems without errors and shortcomings	Colloquium, tests

PC-2ID-9 Know technique carrying out research animals with using digital equipment And special (instrumental) methods V compliance with methodical instructions, instructions, rules diagnostics prevention and animal treatment	When deciding standard tasks Not demonstrated vans basic skills, hadplace rude errors	Demonstrated basic skills, solved typical tasks with not rude mistakes, all completed tasks, but not in in full	Demonstrated all major 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 Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods					
PC-3ID-1 Be able to realizestaging diagnosis V compliance With generally accepted criteria Andclassifications, lists of animal diseases	Knowledge level below minimum requirements, had placerude errors	Minimum acceptable knowledge level, a lot was allowed minor mistakes	Level of knowledge in volume corresponding training program, several allowed minor mistakes	Demonstrated skills at solving non-standard problems without errors and shortcomings	Colloquium, tests
PC-3ID-4 Know techniques data interpretation and analysis special (instrumental) animal research methods	When deciding standard tasks basic skills demonstrated, took placegross mistakes	Demonstrated basic skills, solved typical problems with minor errors, completed all tasks, but not in full	All the main ones are demonstrated skills, all main tasks with minor errors have been solved, all tasks have been completed in full, but some with shortcomings	Demonstrated all major skills, all main tasks with some minor shortcomings have been solved, all tasks have been completed in full	Colloquium, tests

PC-3ID-6 Know etiology And pathogenesis diseases animals various types	When deciding Standard tasks Not basic skills demonstrated, hadthe place is rude errors	Demonstrated basic skills, solved typical tasks with not rude mistakes, all completed tasks, but not in in full	All the main ones are demonstrated skills, solved all main tasks with minor mistakes all tasks completed in full volume, but some with shortcomings	Demonstrated all major skills, all solved main tasks with separate insignificant shortcomings, all completed assignments in full	Colloquium, tests
PC-3ID-7 Know generally acceptedcriteria And classifications diseases animals, approved lists of diseases animals	When deciding standard tasks do not demonstrate basic skills, there were serious mistakes	Demonstrated basic skills, solved typical problems with minor errors, all tasks completed, but not in full	All the main ones are demonstrated skills, solved all main tasks with minor errors, all tasks were completed in full, but some with shortcomings	Demonstrated all major skills, all solved main tasks with some minor shortcomings, all tasks completed in full	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-6ID-1 Be able to use special, V volumenumber digital equipment, at carrying out medical treatment, including physiotherapeutic procedures in according to the instructions for its operation	Knowledge level below minimum requirements, had placerude errors	Minimum acceptable knowledge level, a lot was allowed minor mistakes	Level of knowledge in volume, appropriate program preparation, admitted some not rough errors	Demonstrated skills at solving non-standard problems without errors and shortcomings	Colloquium, tests

PC-6ID-2 Be able to fixanimals For provision safety during medical procedures	Knowledge level below minimum requirements, had placerude errors	Minimum acceptable knowledge level, a lot was allowed minor mistakes	Level of knowledge in volume, appropriate program preparation, admitted some not rough errors	Demonstrated skills at solving non-standard problems without errors and shortcomings	Colloquium, tests
PC-6 ID-3 Be able to lead accounting-reporting documentation By diseases and treatment of animals with using digital technologies	Knowledge level below minimum requirements, therewere rough errors	Minimum Acceptable level of knowledge, many minor mistakes weremade	Level of knowledge in volume, appropriate training program, admitted several not rougherrors	Demonstrated skills at decision non-standard tasks without errors and shortcomings	Colloquium, tests
PC-6ID-7 Know methods of restraining animals at carrying out their treatment	When deciding no standard tasks demonstrated the main skills, hadplace rude errors	Demonstratedbasic skills, solved typical tasks with not rude mistakes, all completed tasks, but not in in full	All the main ones are demonstrated skills, all solved 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-6ID-8 Know forms and filling rules magazine For registration of sick animals and history illnesses animal V compliance With requirements veterinary registration, including digital format	When deciding standard tasks Not basic skills demonstrated, took placegross mistakes	Demonstrated basic skills, solved typical tasks with minor errors, all completed tasks, but not in full	All basic skills demonstrated, all solved main tasks with minor errors, all tasks were completed in full volume, but some with flaws	Demonstrated all major skills, all solved main tasks with separate minor shortcomings, all completed assignments in full	Colloquium, tests

PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment					
PC-10 ID-1 Be able to evaluate effectiveness of treatment	Knowledge level below minimum requirements, had placerude errors	Minimum acceptable knowledge level. a lot was allowed minor mistakes	Level of knowledge in the amount corresponding to the training program, several minor errors were made errors	Demonstrated skills in solving non-standard problems without errors and shortcomings	Colloquium, tests
PC-10 ID-2 Be able to use specialized information databases at choice ways treatment animal diseases	Knowledge level Below minimum requirements, had placerude errors	Minimum allowable 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	Demonstrated skills at solving non-standard problems without errors and shortcomings	Colloquium, tests
PC-10 ID-3 Know methods medicinal treatment sick animals and indications for their use in accordance with methodical instructions, instructions, guidelines, rules diagnostic sprevention and treatment animals	When deciding standard tasks do not demonstrate basic skills, there were serious mistakes	Demonstrated basic skills, solved typical problems with minor errors, all tasks completed, but not in full	Demonstrated we are all basic skills, solved all main tasks with minor errors, all tasks were completed in full, but some with shortcomings	Demonstrated all major skills, all solved main tasks with some minor shortcomings, all tasks completed in full	Colloquium, tests

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

4.1. Typical tasks for ongoing progress monitoring

4.1.1. Questions for the colloquium

Competency assessment questions:

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

PC-2ID-1 Be able to study animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography

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

PC-2ID-9 Know the technique of conducting animal research using digital equipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals

PC-3 Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods

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-6 Know the etiology and pathogenesis of animal diseases of various species

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

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

PC-6ID-2 Be able tosecure animals to ensure safety duringcarrying out medical procedures

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

PC-6ID-7 Knowmethods of restraining animals during their treatment

PC-6ID-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 registration, including in digital format

PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment

PC-10ID-1 Be able to assess the effectiveness of treatment

PC-10ID-2 Be able to use specialized information databases when choosing methods for treating animal diseases

PC-10ID-3 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals

For section 1 "Introduction to veterinary ophthalmology."

Anatomical and topographical data organ vision at animals. Speciesstructural features of the eye. Physiology of the organ of vision:

1. Organization of ophthalmological care for animals
2. Anatomical structure of the orbit and periorbit
3. Anatomical structure of the eyelids.
4. Anatomical structure of the membranes of the eyeball.
5. Anatomical structure of light-conducting structures.
6. Anatomical structure of the lacrimal apparatus.
7. Anatomical features of the innervation of the eye.
8. Anatomical features of the blood supply to the eye.
9. Anatomical features of the lymphatic system of the eye.
10. Muscular apparatus of the eye.
11. Anatomical features of the eye structure in different breeds of dogs
12. Anatomical features of the eye structure in different cat breeds
13. Anatomical features of the structure of the eye in cattle
14. Anatomical structural features of the horse's eye
15. Characteristics of the fundus picture in dogs
16. Characteristics of the fundus picture in cats
17. Characteristics of the fundus picture in cattle
18. Characteristics of the fundus picture in horses
19. Normal refraction
20. Refraction for myopia
21. Refraction for farsightedness
22. Refraction for astigmatism
23. Anisocoria
24. Spasm of accommodation
25. Blood-ophthalmic barrier

4.1.2. Tests

To assess competencies:

PC-2 Development of an animal research program and conducting clinical research 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. What is purulent inflammation of all tissues of the eyeball called?

1. ophthalmitis
2.panophthalmiti
s 3. panoculitis

2. What common eye diseases are identified in cattle?

1. rekketsial conjunctivoceratitis
2. thelaziotic conjunctivoceratitis
3. A-vitaminosis conjunctivoceratitis
4. Botriomycosis conjunctivoceratitis

3. How is follicular conjunctivitis treated?

1.cauterization of follicles with lapis
2.removal of the third eyelid
3. curettage of follicles

4. What is used to treat corneal ulcers?

1. cauterization
2.antibiotic eye drops
3.anti-inflammatory hormonal eye medications

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

5. What is inflammation of the eyelids called?

1.follicu
litis
2.
blepharit
is 3.
rhenitis

6. What are considered protective devices for the organ of vision?

1. bone orbit
2. lens
3. iris
4. lacrimal apparatus
5. eyelids
6. postorbital fat

7What substance in tear fluid inactivates bacteria?

1.
pepsi
n 2
lysoz
yme
3.
trypsi
n

8. What layers are distinguished in the cornea?

1. Bowmanovashell
2. stroma
3.epithelium
4. Descemet's membrane d. endothelium
5. serous membrane

9. What is the Latin name for the tunica albuginea?

1.
scle
ra
2.
ple
ura
3.

reti
na

10. **How many muscles are there in** motor apparatus of the eyeball?

15
2.3
3.7

PC-2$_{ID-9}$Know the techniques for conducting animal research usingdigital equipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals

11. What pathology is associated with blanching of the conjunctiva?

Change in color of the conjunctiva due to etiology:
1. for inflammation
2.for anemia, internal bleeding
3. for liver diseases, horsetail poisoning and as a concomitant symptom of some infectious and invasive diseases

12. What pathology is associated with redness of the conjunctiva?

1. for inflammation
2.for anemia, internal bleeding
3. for liver diseases, horsetail poisoning and as a concomitant symptom of some infectious and invasive diseases

13. What pathology is associated with conjunctival jaundice?

1. for inflammation
2.for anemia, internal bleeding
3. for liver diseases, horsetail poisoning and as a concomitant symptom of some infectious and invasive diseases

14. What is the name of the operation in which the contents of the eyeball are removed leaving the sclera?

1
eviscerati
on
2
enucleatio
n 3.
exenterati
on

15. What is the name of the operation in which the eyeball is removed along with the membranes?

1
eviscerati
on
2
enucleatio
n
3.
exenterati
on

16. What is the name of the operation in which the entire eyeball is removed?

1
eviscerati
on
2
enucleatio

n 3.
exenterati
on
17. What is lens opacity called?
1
catara
ct
2.
xerosi
s
3. collapse

18. **What is the name of**dropsy of the eye?

1.hydrophthalmos
2.glaucoma
3. edema

19. What is the inflammation of all components of the choroid called?
1
uveiti
s
2.reti
nitis
3.sial
anitis

20. What is the name for blurred vision of objects located nearby that is a consequence of refractive error?
1. color
blindness 2.
farsightedne
ss 3. astism
4.myopia
5.anisotrop
y

21. What is the name for blurred vision of objects located far away that is a consequence of refractive error?
1. color
blindness 2.
farsightedne
ss 3. astism
4. myopia
5.
anisotropy

22. What is the name for blurred vision of objects due to refractive error, regardless of distance?
1. color
blindness 2.
farsightedne
ss 3. astism
4.myopia
5.anisotrop
y

23. What are eyelid diseases?
1.
dacreocyst

itis 2.
iridocyclit
is 3.
meibomiti
s 4.
blepharitis

24. What medications are indicated for an acute attack of glaucoma?

1.tetracycline eye ointment
2.chloramphenicol drops
3.pilocarpine drops
4.erythromycin ophthalmic ointment

25. How many times a day should I use antimicrobial eye drops?

1. every 2 hours
2. 2 times a day
3. 3 times
a day 4. at
night

24. What is needed for a fundus examination?

1. constriction of the pupil
2.pupil dilation
3. instillation of drops of chloramphenicol
4. instillation of gentamicin drops

25. What is mydriasis?

1. unequal pupil size
2.constriction of the pupils
3. pupil dilation
4. trembling of the eyeballs

26. What disease is accompanied by increased intraocular pressure?

1. blepharitis
2.keratitis
3.glaucoma
4.conjunctivitis

27. What is the indication for opening an eyelid abscess?

1. sealing the eyelid tissue
2.pain on palpation
3.appearance of fluctuation
4. pronounced hyperemia of the eyelids

28. Miosis (constriction) of the pupil is characteristic of what diseases?

1.uveitis
2.keratitis
3.conjunctivitis
4. blepharitis

29. What tools are considered diagnostic in ophthalmology?

1. pilocarpine
2.fluorescein
3. novocaine
4.gentamicin

30. What drugs are used to dilate the pupil?

1.magnesium sulfate
2.atropine sulfate
3.copper sulfate

31. What is meant by keratomalacia?

1. inflammation of the cornea
2. degenerative change of the cornea
3. absence of cornea

32. What is prescribed for keratomalacia?

1. vitamin A preparations
2. silver preparations
3. iron supplements

33. If the vitreous body is lost, is it restored?

1.recovered
2. not restored

34. What is meant by the term "Symblepharon"?

1. eyelids not closing
2.fusion of the eyelids with the eyeball
3. drooping upper eyelid

35. Who causes thelosis conjunctivitis?

1.bacteria
2. helminths
3.viruses
4. pathogenic fungi

36. What is the absence of a lens called?

1. acromegaly
2.anemia
3.aphakia
4.asthenia

37. What is meant by periodic eye inflammation in horses?

1. purulent panophthalmitis
2.non-purulent panophthalmitis
3.purulent inflammation of all membranes of the eye

38. What endocrine pathology is characterized by bilateral acquired exophthalmos?

1. hyperthyroidism
2.hypothyroidism
3.diabetes mellitus
4. hyperadrenocorticism

39. What species of animals on the pupillary margin are characterized by the presence of grape-shaped bodies (grape seeds)?

1. dogs
2. pigs
3.horses
4.Cattle

40. Indicate which animals lack Bowman's membrane as part of the cornea?

1. dogs
2.pigs
3.horses
4.Cattle

To assess competence:PK-3 Making 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

1. Specify what structure of the eye produces intraocular fluid?

1.cornea
2.vitreous
body

3.ciliary (ciliary) body
4.lens

2. Color perception is associated with the presence of what cells on the retina?

1.
cones
2.
rods
3.
prisms
4.
pyrami
ds

3. Light perception is associated with the presence of what cells on the retina?

1.
cones
2.
rods
3.
prisms
4.
pyrami
ds

4. The lens changes its shape due to muscles located where?

1.in the retractor of the
eyeball 2.in the extraocular
muscle
3.in the ciliary body
4. in the vitreous body

5. What is the lens powered by?

1. arteries and veins of the retina
2. arteries and veins of the conjunctiva
3. diffuse

6. What device is used to study the fundus of the eye?

1. stethoscope
2.ophthalmoscope
3.phonendoscope
4. keratoscope

7. What drugs are classified as absorbable?

1. potassium iodide
2. potassium permanganate
3. potassium bromide

8. For what eye pathologies are hormonal medications contraindicated?

1. acute aseptic keratitis
2. acute aseptic conjunctivitis
3. ulcerative processes on the cornea

9. Tissue therapy preparations (aloe extract, placenta suspension, etc.) are indicated for what diseases?

1. chronic serous keratitis
2. acute serous keratitis

10. At what location of the incised wound in the area of the upper or lower eyelid will the rough scar be less pronounced during healing?

1. with a wound parallel to the palpebral fissure

2. with a wound perpendicular to the palpebral fissure
3. with a wound in an oblique direction to the palpebral fissure

PC-3ID-4 Know the techniques for interpreting and analyzing special data(instrumental) methods of animal research

11. What is the auxiliary apparatus of the eye?

1. Lens
2. Cornea
3. Vitreous body
4. Orbit

12. Which of the following is not part of the choroid?

1. Cornea
2. Sclera
3. Ciliary body
4. Iris

13. Where is the posterior chamber of the eye located?

1. Between the lens and the retina
2. Between the vitreous body and the retina
3. Between the lens and the iris
4. Between the cornea and iris

14. How are corneal cells nourished?

1. Due to the vessels of the cornea
2. Due to diffusion from the anterior chamber fluid and tears?

PC-3ID-6 Know the etiology and pathogenesis of animal diseases of various species

15. What is the pathogenesis of glaucoma?

1. The influx of intrauterine fluid is disrupted
2. The outflow of intrauterine fluid is impaired
3. Outflow of intraocular fluid is normal
4. Pathogenesis is not associated with the outflow of intraocular fluid

16. Damage to which eye structures can cause autoimmune diseases?

1. cornea
2. lens
3. fibrous membrane

17. What is the name of the test to determine tear production and dry eye syndrome??

1. Fluorescein
2. Jones
3. Seidel
4. Schirmer

18. What does the presence of a pupillary reflex indicate?

1. Mandatory indicates the presence of vision
2. Does not necessarily indicate the presence of vision

19. What is the main advantage of the slit lamp?

1. the ability to form a light gap and, due to it, evaluate the relative position of the structures of the anterior segment of the eye, localize the violation of transparency
2. the ability to form a light slit and conduct a fundus examination for a narrow pupil
3. the ability to form a light slit and examine the lens of birds

20. What structures do we usually see during ophthalmoscopy?

1. retinal vessels, optic disc, tapetum, non-tapetal part
2. optic disc, sclera

3. trabecular meshwork and ciliary body

21. What are the purposes of eye ultrasound?

1. determining visual ability
2. diagnosing cataracts
3. assessment of the relative position and shape of the eye structures, as well as assessment of the retrobulbar space

22. Which home interference efficiency systemic funds For treatmentintraocular pathology?

1. complexity of systemic administration
2. blood-ophthalmic barrier
3. blood-brain barrier
4. no interference

23. To be absorbed through the cornea, what must a topical drug have?

1. hydrophilic and lipophilic properties
2. hydrophilic properties
3. lipophilic properties
4. water based only

24. Why cannot fat-based ointments be used to treat intraocular pathology?

1. because of their toxicity to intraocular structures
2. because they cannot cross the corneal epithelium
3. because they cannot cross the corneal stroma
4. since they cannot overcome the corneal endothelium

25. What is the minimum interval between the use of different types of drops in the conjunctival sac?

1. 1 minute
2. 5 minutes
3. 10 minutes
4. 30 minutes

26. Absorption of medications through the cornea with damaged epithelium?

1. does not change
2. decreases
3. does not occur
4. increases

27. For subconjunctival administration, how is the drug administered?

1. under the bulbar conjunctiva
2. under the conjunctiva of the upper eyelid
3. under the conjunctiva of the lower eyelid
4. under the conjunctiva of the third eyelid

28. What is the name of the convenient eye drop system used for horses?

1. cerclage system
2. corsage system
3. bandage system
4. lavage system

29For injection into the anterior chamber of the eye, the drug should not contain what?

1. antibiotics
2. preservatives
3. corticosteroids
4. anesthetics

30During endovitreal insertion, the needle is directed at 45 degrees to the vertical line for what?

1. so as not to touch the lens
2. so as not to get into the anterior chamber 3. so as not to increase eye pressure
4. so as not to cause retinal detachment

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

31. Rational pharmacotherapy of eye diseases should be based on what?

1. the principle of "like cures like"
2. the principle "I've always done it this way, and it was fine"
3. principles of evidence-based medicine
4. folk medicine

32. The type of surgery to remove a tumor on the eyelid is called?

1. cruciform resection
2. resection plastic
3. wedge resection
4. conjunctival plastic surgery

33. What are the two types of infectious agents that cause conjunctivitis in cats?

1. herpesvirus and mycoplasma 2. herpesvirus and chlamydia 3. adenovirus and chlamydia
4. coronavirus and mycoplasma

34. What is the most common eyelid tumor in dogs?

1. meibomian gland adenoma
2. meibomian gland carcinoma
3. Meibomian gland melanoma
4. basalioma of the meibomian gland

35. What drugs for local treatment of ulcerative keratitis are contraindicated in most cases?

1. corticosteroids
2. non-steroidal anti-inflammatory drugs
3. antibiotics
4. humidifiers

36. What is inflammation of the eyelids called?

1. uveitis
2. blephariti s 3. palpebriti s 4. keratitis

37. What is the majority of canine conjunctivitis?

1. primary
2. infectious
3. secondary

4. allergic

38. To diagnose corneal erosion, what do we NOT need?

1. slit lamp
2. fluorescein test
3. head magnifier
4. ophthalmoscope

39. The suture for suturing a wound of the eyelid is called what?

1. figure eight, intramarginal suture
2. ten, intramarginal suture
3. figure eight, interstitial suture
4. figure eight, international suture

40. The diagnosis of "keratoconjunctivitis sicca" can be established using what test?

1. Jones test
2. Schirmer
test 3. Norn
test
4. retropulsion test

41. The diagnosis of "buphthalmos" can be established using what test?

1. Jones test
2. Schirmer
test 3. Norn
test
4. retropulsion test

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

1. The diagnosis of "retrobulbar neoplasm" can be established using what test?

1. Jones test
2. Schirmer
test 3. Norn
test
4. retropulsion test

2. What is used to treat corneal fibrosis?

1. powdered
sugar 2.
vitamin C
3. it cannot
be treated
4.
Antibiotics

3. A specific type of inflammation of the conjunctiva of the free edge of the third eyelid in dogs is called what?

1.
adenom
a
2.
carcino
ma 3.

plasmo
ma 4.
cyst

4. What are the two types of corneal healing for ulcers?

1. palpebral and apalpebral
2. normal and abnormal
3. vascular and avascular
4. capsular and encapsular

5. Congenital pathology of the eyelids, in which part of it is not developed, is called what?

1.
plasmo
ma 2.
adeno
ma 3.
colobo
ma 4.
leukom
a

6. What is the pathognomonic sign of herpesviral conjunctivitis in kittens?

1. adhesive inflammation (diphtheritic films)
2. follicles on the inner surface of the 3rd eyelid
3. purulent discharge
4. chemosis

7. How long does it take for corneal erosion to heal normally?

1. 4 weeks
2. 3 weeks
3. 2 weeks
4. 1 week

8. How many lacrimal glands are there in one dog's eye?

1.eleven
2.3
3.2
4. 1-3

9. For diagnostics quantitative dry keratoconjunctivitis at dogswhat test do they use?

1.
Schirm
era 2.
Norna
3. Seidel
4. fluorescein

10. What drugs play an important role in the treatment of quantitative dry keratoconjunctivitis in dogs?

1. antibiotics - the more, the better
2. cytostatics and humectants
3. propolis and honey
4. transfer of the duct of the parotid salivary gland

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

11. Bilateral uveitis is most often a sign of what?

1. symptom of a systemic

disease
2. result of conjunctivitis
3. contagious
condition
4. sign of lymphoma

12. What is Epiphora?

1. squinting the eye
2. enlargement of the eye
3. purulent discharge
4. lacrimation

13. What does an iris cyst require?

1. surgical removal
2. observation
3. eye removal
4. prescribing antibiotics

14. What is used to diagnose nasolacrimal duct patency?

1. Jones test 1
and 2 2.
Schirmer test
3. Norn's Test
4. retropulsion test

15. What is the main thing in the treatment of uveitis?

1. liver support
2. aloe extract
3. local use of corticosteroids and/or non-steroids
4. protective collar

PC-6ID-3Be able to keep records and reports on diseases and treatmentanimals using digital technologies

16. What are the types of keratoconjunctivitis sicca?

1. purulent and
serous
2. local and
systemic
3. quantitative and qualitative
4. typical and atypical

17. What is Chorioretinitis?

1. inflammation of the vitreous body
2. inflammation of the ciliary body and choroid
3. inflammation of the retina and ciliary body
4. inflammation of the choroid and retina

18. What is a cataract?

1. clouding of the cornea
2. clouding of the lens
3. increased eye pressure
4. vitreous opacification

19. What is glaucoma?

1. retinal pathology
2. vitreous opacification
3. increased eye pressure
4. decreased eye pressure

20. What are cataracts?

1. mature

2.
immatur
e
3.
young
4. newborn

PC-6ID-7 Know the methods fixation of animals during their treatment

21. What types of glaucoma are there?

1. direct and friendly
2. immature and mature
3. primary and secondary
4. old and new

22. What are the types of lens luxation?

1. into the anterior or posterior chamber
2. into the anterior chamber or vitreous body
3. into the posterior chamber or vitreous body
4. out or in

23. What drug cannot be used to relieve an acute attack of glaucoma associated with dislocation of the lens into the anterior chamber?

1. xalatan
2. Dorzopt-plus 3. Maxitrol
4. timolol

24. What is the treatment for cataracts in dogs?

1. therapeutic only
2. cataracts in animals cannot be treated
3. only surgery

25. For treatment glaucoma on sighted eye, at inefficiency therapywhat operation is used?

1. eye removal
2. prosthetic eyeball
3. chemical ablation of the ciliary body
4. endolaser cyclophotocoagulation

26. What condition interferes with vision and requires surgery?

1. initial cataract
2. mature cataract
3. nuclear sclerosis of the lens
3. options B and C are correct

27. When does glaucoma occur?

1. reducing the outflow of intraocular fluid
2. increasing the outflow of intraocular fluid
3. decreased production of intraocular fluid
4. increased production of intraocular fluid

28. Is this entropion?

1. entropion of the eyelid
2. inversion of the eyelid

29. Is this an ectropion?

1. entropion of the eyeli
2. inversion of the eyelid

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

30. Temporary mattress sutures are used to treat what?

1.
entropion
2.
ectropion

31. Stapling is used to treat what?

1.
entropion
2.
ectropion

32. Entropion is more common in which dog breeds?

1.
Shar
Pei
2.
Laik
a

33. Entropion is more common in which cat breeds?

1. sphinx
2. Persian

34. Eversion of the eyelids is more common in what breeds of dogs?

1. basset hound
2. German Shepherd

35. Pathogenetic effects in districhiasis, trichiasis and ectopic eyelashes are associated with what?

1. irritation by eyelashes of the cornea
2. irritation of the conjunctiva by eyelashes

36. What needs to be done for the etiotropic treatment of districhiasis, trichiasis and ectopic eyelashes?

1. eliminate hair follicle
2. carry out anti-inflammatory therapy for the area of inflammation

***37.* Is it Dermoid?**

1. degenerative skin disease of the eyelid
2. the presence of keratinizing epithelium with hair follicles on the sclera or cornea

38. Prolapse of the lacrimal gland of the third eyelid, in which the structure and functionality are preserved, is it advisable to treat how?

1. complete excision
2. suturing using pocket or purse-string suture methods

39. What kind of disease is ectopic eyelash?

1. congenital
2. purchased

PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment

PC-10$_{ID-1}$Be able toevaluate the effectiveness of treatment

1. What is done to diagnose thelaziotic conjunctivitis keratitis?

1. Swabs are taken from the conjunctival sac and microscoped
2. Blood serum is taken and a biochemical analysis is carried out
3. A biopsy of the conjunctiva is taken and a histological analysis is carried out

2. What is the cause of thelosis conjunctivitis?

1. lice eaters
2. mites
3. helminths

3. Who are the mechanical carriers of thelaziotic conjunctivitis keratitis?

1. flies
2. ticks
3. fleas

4. What is done to diagnose reketsial conjunctivitis keratitis?

1. swabs are taken from the conjunctival sac and examined microscopically
2. take fingerprint smears from the conjunctiva, stain according to Romanovsky-Giemsa and microscope
3. take a biopsy of the conjunctiva and perform a histological analysis

5. Who are the mechanical carriers of reketsial conjunctivoceratitis?

1. flies
2. ticks
3. fleas

6. Periodic inflammation of the eyes in the form of aseptic uveitis is typical for whom?

1. pigs
2. sheep
3. horses

7. What is characteristic of A-vitaminosis conjunctivoceratitis?

1. impaired visual acuity in the twilight
2. impaired visual acuity in the daytime
3. impaired visual acuity is not typical

8. Which of the common eye diseases often ends in hemeralopia?

1. reketsial conjunctivitis keratitis
2. telasial conjunctivitis keratitis
3. A-vitaminosis conjunctivitis keratitis

9. When is mass keratomalacia diagnosed in cattle?

1. reketsial conjunctivitis keratitis

2.telazial conjunctivitis keratitis
3.A-vitaminosis conjunctivitis-keratitis

10. Which of the following diseases is not contagious?

1.reketsial conjunctivitis keratitis
2.telasial conjunctivitis keratitis
3. A-vitaminosis conjunctivitis keratitis

PC-10$_{ID-2}$Be able to use specialized informationdatabases when choosing methods for treating animal diseases

11. Is it blepharitis?

1. inflammation of the lacrimal gland
2. inflammation of the third eyelid
3.inflammation of the upper and lower eyelids

12. What is the treatment for blepharitis?

1.prescription of antibiotics 2.influence on the cause 3.surgical treatment

13. Who develops meibomian gland adenoma?

1. young dogs
2. old dogs
3. dogs with viral diseases

14. Distichiasis is a condition in which...?

1.normally growing eyelashesinjure the cornea of the eye
2. eyelash growth occurs from the ducts of the meibomian glands
3. hair gets on the cornea

15. What is used to diagnose nasolacrimal duct patency?

1. Jones test 1 and 2 2. Schirmer test
3. Norn's Test
4. retropulsion test

16. What is the main thing in the treatment of uveitis?

1. liver support
2. aloe extract
3. local use of corticosteroids and/or non-steroids
4. protective collar

17. What is the name of the test to determine tear production and dry eye syndrome??

1. Fluorescein
2. Jones
3. Seidel
4. Schirmer

18. What does the presence of a pupillary reflex indicate?

1. Mandatory indicates the presence of vision
2. Does not necessarily indicate the presence of vision

19. What is the main advantage of the slit lamp?

1. the ability to form a light gap and, due to it, evaluate the relative position of the structures of the anterior segment of the eye, localize the violation of transparency
2. the ability to form a light slit and conduct a fundus examination for a narrow pupil
3. the ability to form a light slit and examine the lens of birds

20. What structures do we usually see during ophthalmoscopy?

1. retinal vessels,
2. optic disc, tapetum, non-tapetal part

.3 optic disc, sclera

4. trabecular meshwork and ciliary body

PC-10$_{ID-3}$Know the methods of drug treatment of sick animals andindications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals

21.What are the purposes of eye ultrasound?

1. determining visual ability 2.

diagnosing cataracts

3. assessment of the relative position and shape of the eye structures, as well as assessment of the retrobulbar space

22. Which home interference efficiency systemic funds For treatmentintraocular pathology?

1. complexity of systemic administration
2. blood-ophthalmic barrier
3. blood-brain barrier
4. there is no interference

23. To be absorbed through the cornea, what must a topical drug have?

1. hydrophilic and lipophilic properties
2. hydrophilic properties
3. lipophilic properties
4. water based only

24. Why cannot fat-based ointments be used to treat intraocular pathology?

1. because of their toxicity to intraocular structures
2. because they cannot cross the corneal epithelium
3. because they cannot cross the corneal stroma
4. since they cannot overcome the corneal endothelium

25. What is the minimum interval between the use of different types of drops in the conjunctival sac?

1. 1 minute
2. 5 minutes
3. 10 minutes
4. 30 minutes

26. Absorption of medications through the cornea with damaged epithelium?

1. does not change
2. decreases
3. does not occur
4. increases

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5.1. Typical tasks for intermediate certification

5.1.1. Questions for testing Formed competence:

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

PC-2ID-1 Be able to study animals using digital equipment and using special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electrocardiography, echography

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

PC-2ID-9 Know the technique of conducting animal research using digital equipment and special (instrumental) methods in accordance with guidelines, instructions, rules for diagnosis, prevention and treatment of animals

1. What is included in the protective apparatus of the eye?
2. List the light-refracting media of the eye.
3. Tell about the structure of the third century.
4. Describe the structure of the upper and lower eyelids.
5. Talk about the muscular system of the eye.
6. Describe the innervation and blood supply of the eye.
7. List the parts of the choroid.
8. Explain the structure of the lens.
9. How is the curvature of the lens regulated?
10. Talk about the innervation and blood supply of the cornea.
11. Describe the histological structure of the cornea.

12. Where are the meibomian glands located and what function do they perform?
13. Describe the structure of the white membrane of the eye.
14. What is a limbus and where is it located?
15. What is tapetum and where is it located?
16. What are grape seeds and where are they found?
17. List the functions of the ciliary body.

Formable competence:

PC-3 Making a diagnosis based on analysis of anamnesis data, general, special (instrumental) and laboratory research methods

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-6 Know the etiology and pathogenesis of animal diseases of various species

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

18. What are the anterior and posterior chambers of the eye formed by, what are they filled with, and how is intraocular pressure maintained constant?
19. Explain the structure of the retina.
20. What is included in the lacrimal apparatus of the eye?
21. Composition of tear fluid
22. The importance of the blood-ophthalmic barrier 23.Tell about the structure of the iris of the eye.
24. Describe the structure of the orbit of the eye.
25. What does the vitreous body of the eye consist of and what functions does it perform?
26. Describe the mechanism of visual perception.
27. What is refraction?
28. What is accommodation?
29. What do the terms emmetropia, myopia and hypermetropia mean?
30. What do the terms astigmatism and anisometropia mean?
31. Othalmoscopy method.
32. Purken-Sanson image method.
33. Definition of visualabilities in animals.
34. Keratoscopy method.
35. Technique for retrobulbar administration of drugs.

Formablecompetence:

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

PC-6ID-2 Be able tosecure animals to ensure safety duringcarrying out medicinal procedures

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

PC-6ID-7 Knowmethods of restraining animals during their treatment

PC-6ID-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 registration, including in digital format

36. Surgical treatment of entropion.

37. Surgical treatment of eversion of the eyelids.
38. Technique for evisceration of the eyeball.
39. Technique for enucleation of the eyeball.
40. Technique of exenteration of the eyeball.
41. Surgical treatment of cataracts.
42. Tactics for treating opacities of the transparent media of the eye.
43. Tactics for treating hemorrhages in the chambers of the eye.
44. Treatment tactics for superficial vascular keratitis
45. Treatment tactics for deep vascular keratitis.
46. Treatment tactics for increased intraocular pressure.
47. Differential diagnostics telesic And requetsious conjunctivalkeratitis.
48. Treatment tactics for follicular conjunctivitis.
49. Tactics for the treatment of superficial, deep and penetrating wounds of the cornea.
50. Treatment tactics for iridocyclochoreoiditis. Treatment tactics for corneal ulcers.
51. Tactics of treatment of aseptic and purulent conjunctivitis.
52. Treatment tactics for orbital phlegmon.
53. Treatment tactics for eyeball dislocation.

Formable competence:

PC-10 Carrying out repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, adjusting the treatment plan for animals (if necessary) based on the results of assessing the effectiveness of treatment

PC-10ID-1 Be able to evaluate effectivenesstreatment

PC-10ID-2 Be able to use specialized information databases when choosing methods for treating animal diseases

PC-10ID-3 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals

54. Diagnosis of orbital fractures and periorbital phlegmon.
55. Diagnosis of eyeball muscle ruptures.
56. Diagnosis of aseptic and purulent keratitis.
57. Diagnosis of inflammation of the eyelids.
58. Diagnosis of cataracts.
59. Diagnosis of glaucoma.
60. Diagnosis of iridocyclochoreoiditis.
61. Diagnosis of retinal detachment and atrophy.
62. Diagnosis of diseases of the lacrimal apparatus.
63. Corneal anesthesia methods
64. Methods of pain relief for the eyeball

6. 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:

The test result is assessed on a percentage rating scale. Each 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

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, it ensures the fulfillment of 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.