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

«APPROVED BY»
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# The Program of the State Final Certification of Graduates
## Specialty 36.05.01 Veterinary Medicine
Profile: General clinical veterinary medicine

The level of higher education: *Specialty*
Standard term of study:     *5 years - full-time education;*
Type of State Attestation Test:
*Preparation for passing and passing the State Exam*
Labor intensity: *6 credit units (216 hours)*

Developer:
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Saint Petersburg - 2025

# 1. OBJECTIVES OF THE FINAL (STATE) ATTESTATION

The objectives of the final (state) attestation are following:

- To establish the graduate's level of preparation for professional tasks and ensure that their training meets the requirements of the Federal State Educational Standard (FSES) of Higher Education in the specialty 36.05.01 "Veterinary Medicine".

- To determine whether the graduate's level of training complies with the qualification requirements in the field of veterinary medicine at the current stage.

- To systematize and consolidate the students' theoretical knowledge and practical skills necessary for working in business environments.

- To prepare university graduates for the independent performance of professional functions.

# 2. CONDITIONS OF ADMISSION TO THE FINAL (STATE) ATTESTATION

A student who has successfully completed the full curriculum of the basic educational program in the specialty 36.05.01 "Veterinary Medicine" of higher education, developed by the university in accordance with the requirements of the Federal State Educational Standard of Higher Education, is eligible to take the state certification tests.

# 3. CHARACTERISTICS OF GRADUATES' PROFESSIONAL ACTIVITY

## 3.1. The Graduate's Field of Professional Activity

Areas of professional activity and fields in which graduates who have completed the specialty program (hereinafter referred to as graduates) can carry out professional activities:

*13 Agriculture* (in the following areas: conservation and promotion of animal health; prevention and treatment of all types of animals, including birds, bees, fish, and aquatic organisms; improvement of the productive qualities of animals; veterinary control; forensic veterinary and veterinary-sanitary expertise).

Graduates may also engage in professional activities in other fields or areas of professional activity, provided that their level of education and acquired competencies meet the qualification requirements for the position.

## 3.2. Objects of Professional Activity of the Graduate

The objects of professional activity for graduates who have completed the specialty program include agricultural, domestic, laboratory, exotic, wild, and commercial animals; birds, bees, fish, aquatic organisms, and other objects of marine and river fisheries; cell cultures, microbiological and viral strains; raw materials and finished products of animal and plant origin; bee products; feed and feed additives; places of their preparation and storage; medicines and biological preparations; technological lines for the production of drugs, products, and feeds; animal husbandry facilities; pastures; reservoirs; slaughterhouses; animal burial grounds; vehicles for transporting animals; as well as enterprises involved in the production, processing, storage, and sale of food products and animal and plant feed.

## 3.3. Tasks of the Graduate's Professional Activity

As part of completing the specialty program, graduates are prepared to perform the following types of professional activities:

Medical

Expert and control

Scientific and educational.

## 3.4. Qualifications Awarded to Graduates:

In accordance with the Federal State Educational Standard for Higher Education, graduates who have completed the educational program in the field of study 36.05.01 "Veterinary Medicine" (specialty level) are awarded the qualification of "Specialist".

# 4. TYPES OF STATE FINAL CERTIFICATION

The state final certification of university students is conducted in the form of a:
- State Examination.

## 4.1. Requirements for the Content and Procedure of the State Examination

The State Exam is conducted according to an approved program containing a list of questions submitted for the State Exam and recommendations for students to prepare for the State Exam, including a list of recommended literature for preparing for the State Exam. Before the State Exam, students are advised on the issues included in the State Exam program (hereinafter referred to as the pre-examination consultation).

State Exams are conducted on tickets drawn up in full accordance with the curricula in the relevant disciplines. The duration of the exam for one student should not exceed 45 minutes. The student is given no more than 20 minutes to answer the ticket's questions. The duration of the written exam is up to 4 hours.

The State Exam is conducted as a comprehensive interdisciplinary test. Control tasks for the exam are formed no later than one month before the exam date.

The list of academic disciplines of the Educational Program of Higher Education in the specialty 36.05.01 "Veterinary Medicine" submitted for the State Exam:

1. Parasitology and invasive diseases;
2. Clinical diagnosis;
3. Epizootology and infectious diseases;
4. Veterinary and sanitary examination;
5. Obstetrics and gynecology;
6. General and private surgery;
7. Internal non-infectious diseases;
8. Pathological anatomy and forensic veterinary examination;
9. Organization of veterinary business.

Preparation and passing of the State Exam

Students who have no academic debt and who have fully completed the curriculum or individual curriculum for the higher education program specialty 36.05.01 "Veterinary Medicine" are allowed to take the state exam.

To conduct the exam, the graduating departments prepare a list of questions, according to which the educational department generates exam tickets. Each ticket contains two theoretical questions.

The wording of the exam ticket questions coincides with the wording of the list of recommended questions for the preparation of the state exam, brought to the attention of students on the eve of the examination session.

No later than 30 calendar days before the day of the first State Attestation Examination, the schedule of state attestation examinations (hereinafter referred to as the schedule) is approved, which indicates the dates, time and place of the State Attestation Examinations and pre-examination consultations, and the schedule is brought to the attention of the student, members of state examination commissions and appeal commissions, secretaries of State Examination Commissions, managers and consultants of final qualifying works.

Before the State Exam, teachers in the disciplines included in the State Exam consult students on issues and tasks included in the assessment fund of the State Exam (pre-examination consultations).

Preparation for the State Exam contributes to the consolidation, deepening, and generalization of knowledge acquired in the learning process, as well as their application to solving practical problems. Pre-examination consultations allow you to systematize the knowledge gained during the training and the practical experience gained during the internship.

Consultations are held immediately before the State Exam in accordance with the schedule approved by the Rector's order. During the consultation, a number of organizational issues are being resolved, clarifying issues that could cause difficulties in the process of independent training of students. Consultations are conducted either in the form of a question-and-answer conversation or a lecture, after which the teacher necessarily answers the students' questions.

During the consultation:

- Students get acquainted with the form and procedure of the exam – its duration, rules for completing answers, etc. are specified;
- Teachers answer all questions of interest to students within the framework of the state exam program;
- Teachers give recommendations on the use of methodological and educational literature, including from the electronic library system in the process of independent preparation for the State Exam.

The State Examination is conducted orally in the form of a final interdisciplinary examination at a meeting of the State Examination Commission (SEC).

The Secretary keeps minutes of the meetings of the SEC. If necessary, the protocols are submitted to the appeals commission.

The examinees take a ticket, name its number, and take an individual seat at the tables to prepare their answers. They are advised to prepare their answers to the exam paper in writing within the allotted time. The answers to the questions of the examination card are recorded on special examination sheets with the Dean's office seal. On the sheet, the student must indicate the full name, specialty, and ticket number. At the end of the recording of the answer to the questions, the date of passing the State Exam and the student's signature is indicated.

The graduate, who has prepared for the answer, takes a place in front of the examination board in the order of the queue.

The commission provides an opportunity for the examinee to give a complete answer to all the questions on the ticket. The answers to the questions should be concise and freely expressible. When answering the exam, a variety of opinions is allowed. This means that the student has the right to choose any point of view on a controversial issue, but with the condition of a sufficiently reasoned position.

The results of the State Exam are determined by the grades "excellent," "good," "satisfactory," or "unsatisfactory," based on an oral conversation between the graduate and members of the examination committee on ticket issues and additional issues.

If preparing the answer to the State Exam the graduate used unauthorized reference materials and means of communication, the members of the SEC have the right to decide to remove the graduate from the exam with further inclusion of the "unsatisfactory" grade in the SEC protocol.

The assessment for the State Exam is given in accordance with the assessment scale.

At the end of each meeting of the SEC, with the obligatory presence of the chairman, a consolidated assessment sheet is filled out, in which one final grade is given for each graduate, which is determined through a discussion of the opinions of the SEC members. The commission's decisions are made by a simple majority of the votes of the persons who are members of the commission and participate in the meeting. If the number of votes is equal, the Chairman of the State Examination Commission has the casting vote.

The final grade is also entered into the protocol, which is signed by the chairman and secretary of the SEC, in the graduate's credit book, and the examination sheet, where the chairman and members of the SEC are signed.

The results of the State Examination are announced to the examinees on the same day after the minutes of the meeting of the State Examination Commission are drawn up in accordance with the established procedure.

The examination sheet and the credit books of graduates are transferred to the University's academic department.

The graduate has the right to file a written appeal to the Appeal Commission for violation, in their opinion, of the established procedure for conducting the State Attestation Examination or in case of disagreement with the results of the State Examination.

The results of the State Examination are announced on the day of its taking.

**4.2. Organization of the Procedure for Evaluating the Results of Mastering the Educational Program for Students with Disabilities**

For students with disabilities, the State Final Certification is carried out taking into account the specifics of their psychophysical development, their individual capabilities, and state of health (hereinafter referred to as individual characteristics).

At the written request of a student with a disability, the duration of passing the State Attestation Examination by a student with a disability may be increased in relation to the established duration of its passing: the duration of passing the State Examination conducted in writing is no more than 90 minutes; the duration of preparing the student for the answer to the State Examination conducted orally is no more than 20 minutes.

Depending on the individual characteristics of students with disabilities, the University ensures that the following requirements are met when conducting a state certification test:

a) for the visually impaired: assignments and other materials for passing the state certification test are printed in enlarged font; individual uniform lighting of at least 300 lux is provided; if necessary, students are provided with an enlarging device, it is allowed to use magnifying devices available to students;

b) for the deaf and hard of hearing, with severe speech impairments, the availability of sound-amplifying equipment for collective use is ensured, if necessary, students are provided with sound-amplifying equipment for individual use; at their request, state certification tests are conducted in writing;

c) for people with disorders of the musculoskeletal system (severe disorders of the motor functions of the upper extremities or the absence of upper limbs), written tasks are performed by students on a computer with specialized software or dictated to an assistant; at their request, state certification tests are conducted orally.

No later than 3 months before the start of the state final certification, a disabled student submits a written statement on the need to create special conditions for him during the state certification tests, indicating the specifics of his psychophysical development, individual capabilities, and health status (hereinafter referred to as individual characteristics). The application must be accompanied by documents confirming that the student has individual characteristics (in the absence of these documents in his personal file). In the application, the student indicates the need (lack of need) for the presence of an assistant at the state attestation test, the need (lack of need) to increase the duration of the state attestation test in relation to the established duration (for each state attestation test).

- When conducting the state final certification, the following general requirements are met:

- conducting a state final assessment for the disabled in the same classroom together with students who do not have limited health opportunities, if this does not create difficulties for students during the state final assessment;

- the presence of an assistant(s) in the classroom who provides students with disabilities with the necessary technical assistance, taking into account their individual characteristics (to take a workplace, move around, read and complete an assignment, communicate with members of the state examination committee);

- the use of technical means necessary for students with disabilities when passing the state final certification, taking into account their individual characteristics;

-       ensuring the possibility of unhindered access of students with disabilities to classrooms, toilets, and other rooms, as well as their stay in these rooms (the presence of ramps, handrails, extended doorways, elevators, in the absence of elevators, the auditorium should be located on the ground floor, the presence of special chairs and other devices).

**4.3.  Procedure for Filing and Reviewing an Appeal**

The student has the right to file a written appeal to the Appeal Commission on violation, in his opinion, of the established procedure for conducting the State Attestation Examination and (or) disagreement with the results of the State Examination.

Appeals commissions are established at the University to consider appeals based on the results of the State Final Attestation, which consist of the chairman and members of the commission who are not members of the SEC. The appeal commissions operate during the calendar year. The Rector of the University or a person authorized by the Rector's order is approved as the Chairman of the appeal commission.

The appeal is submitted personally by the student to the appeals commission no later than the next business day after the announcement of the results of the state attestation test.

To consider the appeal, the secretary of the State Examination Commission sends to the appeal commission the minutes of the meeting of the State Examination Committee, the conclusion of the Chairman of the State Examination Committee on compliance with procedural issues during the State Attestation Examination, as well as written answers from the student (if any) (for consideration of the appeal on the state examination).

The appeal is considered no later than 2 working days from the date of filing the appeal at a meeting of the Appeals Commission, to which the chairman of the SEC and the student who filed the appeal are invited. The decision of the Appeal Commission is brought to the attention of the student who filed the appeal, within 3 working days from the date of the meeting of the Appeal Commission. The fact of familiarization of the student who filed the appeal with the decision of the appeal commission is certified by the student's signature.

When considering an appeal about a violation of the procedure for conducting a State Attestation Examination, the Appeals Commission makes one of the following decisions:

-       to reject the appeal if the information contained therein about violations of the procedure for conducting a State Attestation Examination of a student has not been confirmed and/or has not affected the result of the State Attestation Examination;

-       the satisfaction of the appeal, if the information contained in it about violations of the procedure for conducting the state attestation examination of the student has been confirmed and influenced the result of the State Attestation Examination.

In the case specified in the third paragraph of this paragraph, the result of the State Attestation Examination is subject to cancellation, and therefore the protocol on the consideration of the appeal is transmitted to the SEC for the implementation of the decision of the appeals Commission no later than the next business day. The student is given the opportunity to pass the state certification test within the time limits set by the University.

When considering an appeal of disagreement with the results of the state examination, the appeals commission makes one of the following decisions:

- on the rejection of the appeal and the preservation of the result of the state test;

- on the satisfaction of the appeal and the presentation of a different result of the state test.

The decision of the appeal commission is submitted to the State Examination Commission no later than the next business day. The decision of the appeals commission is the basis for canceling the previously issued result of the state exam and issuing a new one.

The decision of the appeal commission is formalized by a protocol signed by the chairman of the commission, is final and is not subject to revision.

The re-examination of the State Attestation Examination of the student who filed the appeal is carried out in the presence of one of the members of the appeal commission no later than the date of completion of training at the organization in accordance with the educational standard.

An appeal against the re-conduct of the State Attestation Examination is not accepted.

**4.4. Material and Technical Support of the State Examination**

The material and technical support for the state final attestation ensures the availability of a designated space for conducting the state exam. The exam is held in classrooms equipped with workstations for the chairman and members of the State Examination Committee, as well as for students admitted to the exam.

A list of licensed and freely distributed software, including domestically produced programs, is provided.

| № | Technical and computer programs recommended by sections and topics of the program | 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 | ConsultantPlus System | 503/KL |
| 7 | Android OS | free software |

## 5. PROCEDURE FOR AWARDING QUALIFICATIONS AND ISSUING DIPLOMAS

Based on the results of the state final certification of students, the SEC decides on awarding them qualifications in their specialty and issuing a diploma of higher education. The assignment of appropriate qualifications and the issuance of a diploma of higher education are carried out on the condition that the student successfully passes all the established types of certification tests included in the state final certification.

A diploma with honors is awarded to a student who has passed the exams with an excellent grade in at least 75% of all disciplines included in the diploma supplement, and in the remaining disciplines included in this appendix with a good grade, and has passed the final state certification with excellent grades.

Decisions on the assessment of a graduate's knowledge during the state final certification, as well as on the assignment of qualifications and the issuance of a diploma (without distinction or with distinction), are made by the SEC at closed meetings through open voting by a simple majority of the commission members participating in the meeting. If the number of votes is equal, the chairman's vote is decisive.

## 6. REPORT OF THE STATE EXAMINATION COMMISSION

По Upon completion of the work of the State Examination Commission, the chairman draws up a report on the commission's work and submits it to the Rector of the University no later than two weeks after the commission's work is completed.

The report should reflect:
- the level of training of specialists in this field;
- characteristics of the knowledge of specialists identified during the final assessment;
- disadvantages in the training of specialists in certain disciplines.

The report may include recommendations for further improvement of specialists.

The report on the work of the SEC is presented at the Academic Council of the University along with recommendations for improving the quality of professional training of specialists.

# 7.    RESPONSIBILITY

The Vice-Rector for Educational Work and Youth Policy is responsible for ensuring compliance with the established requirements for the organization and conduct of the Final State Certification.

The head of the educational department is responsible for meeting the requirements of educational standards and supervises the implementation of curricula and schedules of the educational process during the final state certification.
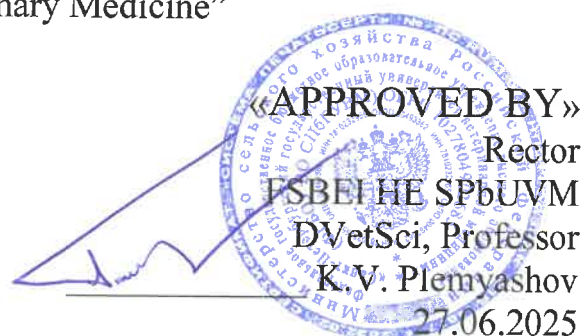
The Dean of the Faculty is responsible for the organization and working procedure of the State Examination Commissions, the formation of the composition of the SEC, and the scheduling of certification tests.

The Chairman of the SEC is responsible for organizing the activities of the examination board, supervising its work, and ensuring uniformity in the requirements for graduates. The chairman is also responsible for preparing the report on the commission's work and submitting it to the Rector in a timely manner.

The heads of departments are responsible for the timely approval of issues related to admission to the State Certification.

Ministry of Agriculture of the Russian Federation Federal
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# FUND OF ASSESSMENT TOOLS
## for the Final (State) Attestations in the Specialty 36.05.01
## Veterinary Medicine

Profile: General clinical veterinary medicine

The level of higher education: **Specialty**
Standard term of study: **5 years - full-time
education**

Saint Petersburg - 2025

# 1. THE FUND OF ASSESSMENT TOOLS FOR THE STATE FINAL ATTESTATION

### 1.1. The List of Competencies That Students Must Acquire upon Completion of the Educational Program

A graduate of the specialty 36.05.01 "Veterinary Medicine" must possess the following competencies, which will be assessed during the state final certification:

**Universal competencies of graduates and indicators of their achievement**

| Category of universal competencies | Code and title of the universal competence | Code and indicator title of the universal competence achievement |
|---|---|---|
| Systemic and critical thinking | **UC-1.** Is able to carry out a critical analysis of problematic situations based on a systematic approach, to develop a strategy for manipulation | **UC-1 ID-1**<br>**To know** methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis<br>**UC-1 ID-2**<br>**To be able to** gain new knowledge based on analysis, synthesis, etc.; collect and summarize data on current scientific problems, related to the professional field; search for information and solutions based on actions, experiment, experience, and information and communication technologies. технологий.<br>**UC-1 ID-3**<br>**To possess skills** of evaluation of the problem of professional activity with the analyze of synthesis and other methods of intellectual activity, including the use of information and communication technologies; identification of problems and the use of adequate methods to solve them; demonstration of value judgments to solve problematic professional situations. |
| Project development and implementation | **UC-2.** Is able to manage the project at all stages of life cycle | **UC-2 ID-1**<br>**To know** methods of presentation and description of the project activities results; methods, criteria and parameters for evaluation of the results of project implementation; principles, methods and requirements for project work<br>**UC-2 ID-2**<br>**To be able to**: substantiate the theoretical and practical significance of the results obtained; check and analyze project documentation; predict the development of processes in the project professional field; put forward innovative ideas and non-standard approaches to its solution in order to implement the project; calculate qualitative and quantitative results, deadlines for project work.<br>**UC-2 ID-3**<br>**To possess skills of:** project management in the field of relevant professional activity: assignment of tasks and motivation to achieve goals; management of the development of the project's terms of |

| | | reference, management of the implementation of specialized project work, its negotiation and datalisation; participation in the development of the project's terms of reference. Development of the project implementation program in the professional field; organization of professional discussion of the project, participation in the management of project documentation; design of the project implementation schedule; definition of the requirements for the results of the project. |
|---|---|---|
| Teamwork and leadership | **UC-3.** Is able to organize and manage the work of the team, developing a team strategy to achieve the set goal | **UC-3 ID-1** <br> **To know** the ways of selecting an effective team; the basic conditions for effective teamwork; the basics of strategic human resource management, regulatory legal acts related to the organization and implementation of professional activities; models of organizational behavior; combining factors of organizational relations; strategies and principles of teamwork, the main characteristics of the organizational behavior and interaction of team members in the organization. <br> **UC-3 ID-2** <br> **To be able to**: determine the management style and effectiveness of team management; develop a team strategy; apply the principles and methods of organizing team activities; choose methods and techniques for researching professional practical tasks. <br> **UC-3 ID-3** <br> **To possess skills** to use team building for realisation set goals; to create team to perform practical tasks; to participate in the development of a teamwork strategy; of the ability to work in a team. |
| Communication | **UC-4.** Is able to apply modern communication technologies, also in a foreign language(s), for academic and professional interaction | **UC-4 ID-1** <br> **To know**: computer technologies and information media of the organization work; communication in professional ethics; factors for improvement of the team communication, communication technologies in professional interaction; characteristics of communication flows; the importance of communication in professional interaction; research methods of the communicative potential of the individual; modern means of information and communication technologies <br> **UC-4 ID-2** <br> **To be able to**: create written texts of scientific and official business speech styles on professional issues in Russian and foreign languages; explore the passage of information on management communications; determine internal communications in the organization, including using digital technologies. |

| | | UC-4 ID-3<br>**To possess skills of** the principles of forming a communication system; analyze the system of communication links in the organization by carrying out oral and written communications, including in a foreign language: presentation of plans and results of their own and team activities, using communication technologies; technology for building effective communication in the organization; transfer of professional skills in information and telecommunication networks; use of modern means of information and communication technologies |
|---|---|---|
| International interaction | **UC-5.** Is able to analyze and take into account the diversity of cultures in the process of intercultural interaction. | UC-5 ID-1<br>**To know**: the psychological foundations of social interaction aimed at solving professional tasks; the basic principles of organization business contacts; methods of preparation for negotiations, national, ethno-cultural and confessional characteristics and folk traditions of the population; the basic concepts of interaction in the organization, the features of didactic interaction.<br>UC-5 ID-2<br>**To be able to**: present professional information in complete and in an accessible manner during the process of intercultural interaction; observe ethical norms and human rights; analyze the features of social interaction, taking into account national, ethno-cultural and confessional characteristics.<br>UC-5 ID-3<br>**To possess skills of**: the organization of productive interaction in a professional environment, taking into account national, ethno-cultural, confessional characteristics; overcoming communicative, educational, ethnic, confessional and other barriers in the process of intercultural interaction; identification of cultural diversity in the process of intercultural interaction. |
| Self-organization and self-development (including health care) | **UC-6.** Is able to determine and implement the private priorities activities and ways to improve them based on self-assessment and life along education | UC-6 ID-1<br>**To know**: the content of the processes of self-organization and self-education, its features and technologies of implementation, based on the goals of improving professional activity**.**<br>UC-6 ID-2<br>**To be able to** build the self process of mastering selected and structured information, including digital technologies.<br>UC-6 ID-3<br>**To possess skills of**: techniques of self-regulation of psycho-emotional and functional status. |
| | **UC-7.** Is able to maintain an adequate level of | UC-7 ID-1<br>**To know**: basic means and methods of physical |

| | | physical fitness to ensure full-fledged social and professional activities | education.<br>**UC-7 ID-2**<br>**To be able to**: select and apply methods and means of physical culture to improve basic physical qualities.<br>**UC-7 ID-3**<br>**To possess skills of:** methods and means of physical culture to ensure full-fledged social and professional activities. |
|---|---|---|---|
| Life safety | **UC-8.** Is able to create and maintain safe living conditions, including cases of emergency situations | | **UC-8 ID-1**<br>**To know**: the consequences of harmful and dangerous factors exposure on the body of animals, humans and the natural environment, methods of protection from emergencies and military conflicts; fundamentals of life safety, telephone numbers of rescue services.<br>**UC-8 ID-2**<br>**To be able to**: identify the signs, causes and conditions of emergencies and military conflicts; assess the likelihood of a potential danger to the student and take measures to prevent it in an educational institution; provide first aid in emergency situations.<br>**UC-8 ID-3**<br>**To possess skills of**: the ways to ensure safety in the human-animal-habitat system. Possess methods of forecasting the occurrence of dangerous or emergency situations; skills in maintaining safe living conditions, including those based on digital technologies. |
| Economic culture, including financial literacy | **UC-9.** Is able to make informed economic decisions in various areas of life | | **UC-9 ID-1**<br>**To know**: the conceptual apparatus of economic science, the basic principles of the functioning of the economy, the goals and mechanisms of the main types of social economic policy.<br>**UC-9 ID-2**<br>**To be able to**: use methods of economic and financial planning to achieve the set goal, including digital technologies.<br>**UC-9 ID-3**<br>**To possess skills of**: the use of economic tools for financial management, with the use of digital technologies as well, taking into account economic and financial risks in various areas of life**.** |
| Civil position | **UC-10.** Is able to form an intolerant attitude towards manifestations of extremism, terrorism, and corrupt behavior and counteract them in profes-sional activities. | | **UC-10 ID-1**<br>**To know**: the basic terms and concepts of civil law used in anti-corruption legislation, the current anti-corruption legislation and the practice of its application, the legal framework for countering terrorism and extremism<br>**UC-10 ID-2**<br>**To be able to**: interpret correctly the civil law terms |

| | | with the use of digital technologies as well, used in anti-corruption legislation; assess corrupt behavior and apply anti-corruption legislation in practice, analyze factors contributing to extremism, terrorism as a particularly dangerous socio-legal phenomenon **UC-10 ID-3**<br>**To possess skills of**: correct behavior interpretation, with the use of digital technologies, as well, civil law terms used in anti-corruption legislation, basics of application of anti-corruption legislation in practice, the skills to assess various phenomena of public life in order to identify signs of extremism and terrorism. |
|---|---|---|

**General professional competencies of graduates and their achievements**

| Category of general professional competencies | Code and title of the general professional competence | Code and indicator title of the achievement of general professional competence |
|---|---|---|
| General professional skills | **GPC-1.** Is able to determine the biological status, normal clinical signs of organs and systems of the animal body. | **GPC-1 ID-1**<br>**To know**: safety precautions and personal hygiene rules during the examination of animals, methods of its fixation; schemes of clinical examination of an animal and the procedure for examination individual body systems; methodology for diagnosis of the pathological process<br>**GPC-1 ID-2**<br>**To be able to**: collect and analyze anamnesis data, conduct laboratory and functional studies, necessary to determine the animal biological status.<br>**GPC-1 ID-3**<br>**To possess practical skills**: for conducting on its own a clinical examination of an animal, using classical research methods and digital technologies. |
| Taking into account environmental factors | **GPC-2.** Is able to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on the physiological status of the animal body. | **GPC-2 ID-1**<br>**To know**: ecology factors of the environment, its classification and the nature of relationships with living organisms; basic ecological concepts; interspecific relations of animals and plants, terms and bio ecology laws, parasites and hosts; ecological features of some types of pathogenic microorganisms; mechanisms of influence of anthropogenic and economic factors on the animal body.<br>**GPC-2 ID-2**<br>**To be able to**: use environmental factors and environmental laws in agricultural manufacture; apply the achievements of modern microbiology and ecology of microorganisms in animal husbandry and veterinary medicine in order to prevent infectious and invasive diseases and treat animals; use environmental monitoring methods in the environmental assessment of agricultural facilities and the production of agricultural products; assess the impact on the animal body, anthropogenic and economic factors |

| | | **GPC-2 ID-3**<br>**To possess skills of**: the knowledge of the origin of living organisms, the levels of organization of living matter, favorable and unfavorable factors affecting the body; the basis for studying environmental knowledge of the environment, the laws of the development of nature and society; skills of observation, comparative analysis, historical and experimental modeling of the impact of anthropogenic and economic factors on living objects, with the use of digital technologies as well. |
|---|---|---|
| Legal basis of professional activity | **GPC-3.** Is able to carry out and improve professional activities in accordance with regulatory legal acts in the field of agro-industrial complex. | **GPC-3 ID-1**<br>**To know**: the basics of national and international veterinary legislation, specific rules and regulations, governing veterinary activities at the local, national and international levels.<br>**GPC-3 ID-2**<br>**To be able to:** find up to-date, relevant and reliable information about veterinary legislation, rules and regulations governing veterinary activities in a particular region and/or country.<br>**GPC-3 ID-3**<br>**To possess skills of:** the legal framework and ethical standards in the implementation of professional activities. |
| Modern technologies, equipment and scientific foundations of professional activity | **GPC-4.** Is able to use methods to solve problems, using modern equipment for the development of new technologies in professional activity and use modern professional methodology to conduct experimental research and interpret the results. | **GPC-4 ID-1**<br>**To know**: the technical capabilities of modern specialized equipment, methods of problems resolution in professional activity.<br>**GPC-4 ID-2**<br>**To be able to**: apply modern technologies and research methods in professional activities, interpret the results obtained.<br>**GPC-4 ID-3**<br>**To possess skills of**: the work with specialized equipment for implementation of the set tasks for research and the development of new technologies, digital ones, as well. |
| Presentation of the results of professional activities | **GPC-5.** Is able to draw up special documentation, analyze the results of professional activity and | **GPC-5 ID-1**<br>**To know**: modern software, basic system software products and application software packages; technical |

| | | means of implementation information processes<br>**GPC-5 ID-2**<br>**To be able to**: apply new information technologies to solve tasks in professional activity, work with specialized information databases.<br>**GPC-5 ID-3**<br>**To possess skills of**: the work with the operating system, text and table processors, database management systems, information search systems on the Internet. |
|---|---|---|
| | submit accounting documents, using specialized databases. | |
| Risk analysis for human and animal health | **GPC-6.** Is able to analyze, identify and assess the risk danger of the occurrence and spread of the disease. | **GPC-6 ID-1**<br>**To know**: existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control by the relevant veterinary services.<br>**GPC-6 ID-2**<br>**To be able to**: assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed<br>**GPC-6 ID-3**<br>**To possess skills to**: conduct identification procedures, select and implement measures that can be used to reduce the risk level. |
| Information and communication technologies for professional activities | **GPC-7.** Is able to understand the principles of modern information technologies and use them to solve professional tasks | **GPC-7 ID-1**<br>**To know**: modern technical means and information technologies<br>**GPC-7 ID-2**<br>**To be able to**: use modern technical means and information technologies, including elements of machine learning and artificial intelligence to solve analytical and research problems.<br>**GPC-7 ID-3**<br>**To possess skills to:** use modern technical means and information technologies to solve analytical and research problems. |

## Professional competencies of graduates and indicators of their achievement

| Labor function | Code and title of professional competence | Code and indicator tittle of achievement of professional competence |
|---|---|---|
| Conducting a clinical examination of animals to establish a diagnosis | **PC-1.** Anamnesis of animal life and disease to identify the cause of disease, conduct a general clinical study of animals in order to establish a preliminary diagnosis and determine the ongoing research program | **PC-1 ID-1** <br> **To be able to** collect and analyze information about the origin and purpose of animals, the method and conditions of husbandary, feeding (anamnesis of animal life), including use of sensor devices, mechanisms, sensors, tags, etc. <br> **PC-1 ID-2** <br> **To be able to** collect and analyze information about the occurrence and manifestation of animals diseases, previously transmitted diseases, epizootological conditions (anamnesis of animal disease), with the use of sensor devices, mechanisms, sensors, tags, etc. <br> **PC-1 ID-3** <br> **To be able to** fix animals to ensure safety during a clinical trial <br> **PC-1 ID-4** <br> **To be able to** perform a clinical examination of animals, using common methods: examination, palpation, percussion, auscultation and thermometry. <br> **PC-1 ID-5** <br> **To be able to** establish a preliminary diagnosis based on anamnesis analysis and clinical research, using general methods. <br> **PC-1 ID-6** <br> **To know** the method of collecting animals anamnesis of life and disease. <br> **PC-1 ID-7** <br> **To know** the factors of animal life that contribute to the occurrence of infectious and non-infectious diseases. <br> **PC-1 ID-8** <br> **To know** the forms and rules for filling out the journal for the registration of sick animals and the animal's medical history, including in electronic form in accordance with the requirements of veterinary rules. <br> **PC-1 ID-9** <br> **To know** the methods of animals' fixation during clinical examination. <br> **PC-1 ID-10** <br> **To know** the technique of conducting an animal clinical study, using general methods, in accordance with the guidelines, instructions, rules for the diagnosis, prevention and treatment of animals. |
|  | **PC-2.** Development of an animal research program and conduction of clinical study, using special (instrumental) and laboratory methods to clarify the diagnosis | **PC-2 ID-1** <br> **To be able to** study animals, using digital equipment and special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electro cardiography, echography <br> **PC-2 ID-2** <br> **To be able to** interpret and analyze data from special (instrumental) animal research methods to verify the diagnosis. <br> **PC-2 ID-3** <br> **To be able to** determine the reaction of the cardiovascular system of animals to various loads by the method of functional tests. <br> **PC-2 ID-4** <br> **To be able to** take samples of animal biological material for laboratory research. |

| | | PC-2 ID-5 **To be able to** perform analytical preparation, storage of the studied biological material, transportation to the laboratory |
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| | | PC-2 ID-6 **To be able to** interpret and analyze data from laboratory animal research methods for diagnosis. |
| | | PC-2 ID-7 **To know** the indication for the use of digital equipment, special (instrumental) and laboratory methods of animal research in accordance with the guidelines, instructions, rules for the diagnosis, prevention and treatment of animals |
| | | PC-2 ID-8 **To know** the safe rules of operation with digital equipment, tools and equipment, used in special (instrumental) animal studies, including X-ray examinations. |
| | | PC-2 ID-9 **To possess skills of** the technique of the animal study, using digital equipment and special (instrumental) methods in accordance with methodological guidelines, instructions, rules for the diagnosis, prevention and treatment of animals. |
| | | PC-2 ID-10 **To know** the methods and techniques of administration diagnostic and radiopaque substances for the animal. |
| | | PC-2 ID-11 **To possess skills of** the technique of setting functional tests for animals. |
| | | PC-2 ID-12 **To know** the methodology of sampling and analytical fullfilment of biological material samples for execution of laboratory analyses in accordance with the instructions and methodological documents, regulating the sampling of biological material |
| | **PC-3.** To set the diagnose based on the analysis of anamnesis, general, special (instrumental) and laboratory research methods | PC-3 ID-1 **To possess skills to** make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases. |
| | | PC-3 ID-2 **To possess skills to** use specialized information databases for the diagnosis of animal diseases |
| | | PC-3 ID-3 **To possess skills to** document the results of clinical animal studies, using digital technologies. |
| | | PC-3 ID-4 **To know** the methods of interpretation and data analysis of special (instrumental) methods of animal examination. |
| | | PC-3 ID-5 **To know** the norms of indicators of the status of animals' biological material of different species and the reasons that cause deviations from the norms. |
| | | PC-3 ID-6 **To know** the etiology and pathogenesis of animal diseases of various species. |
| | | PC-3 ID-7 **To know** the generally accepted criteria and classifications of animal diseases, approved lists of animals disease. |
| | **PC-4.** To performe postmortem diagnostic | PC-4 ID-1 |

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| | examination of animals in order to establish pathological processes, diseases, cause of death | **To be able to** collect the anamnesis of life and disease of the examined animals after death<br>**PC-4 ID-2**<br>**To be able to** perform a general examination of animal cadaver before autopsy.<br>**PC-4 ID-3**<br>**To be able to** perform autopsy of animal cadaver, using special tools and in compliance with safety requirements.<br>**PC-4 ID-4**<br>**To be able to** carry out the selection and fixation of samples of pathological material for laboratory research, using digital technologies<br>**PC-4 ID-5**<br>**To be able to** establish the cause of death and a patho-anatomical diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases.<br>**PC-4 ID-6**<br>**To be able to** document the results of the animal postmortem diagnostic examination in the autopsy protocol, including digital technologies.<br>**PC-4 ID-7**<br>**To know** the veterinary and sanitary requirements for the process of animals cadaver dissection, in accordance with the legislation of the Russian Federation in the field of veterinary medicine.<br>**PC-4 ID-8**<br>**To know** the rules of work with special tools for dissection of animal cadaver.<br>**PC-4 ID-9**<br>**To know** the methods and techniques of autopsy of animals cadaver of various species.<br>**PC-4 ID-10**<br>**To know** the methodology of sampling and fixation of pathological material for laboratory research. in accordance with the rules in this field.<br>**PC-4 ID-11**<br>**To know** the forms and procedure for fulfillment of an autopsy protocol of an animal, including digital technologies. |
| Carrying out measures for the treatment of sick animals | **PC-5.** To carry out plan of animal treatment, based on the stated diagnosis and animals individual character ristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body. | **PC-5 ID-1**<br>**To be able to** use specialized information databases at a choice of animal treatment methods.<br>**PC-5 ID-2**<br>**To be able to** calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period.<br>**PC-5 ID-3**<br>**To be able to** calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well.<br>**PC-5 ID-4**<br>**To be able to** administer drugs to the animals body in various techniques.<br>**PC-5 ID-5**<br>**To know** the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment.<br>**PC-5 ID-6** |

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| | | To **know** the state register of medicines for veterinary use. **PC-5 ID-7** To **know** the pharmacological and toxicological characteristics of medicinal raw materials, remedies of chemical and biological nature, biologically active additives for the prevention and treatment of animal diseases of various etiology. **PC-5 ID-8** To **know** the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods |
| | **PC-6.** The selection of the variety of methods of non-drug therapy, including physiotherapy methods for the treatment of animals, carry out therapeutic, including physiotherapy procedures using special equipment in compliance with safety rules. | **PC-6 ID-1** To **be able to** use special, both digital therapeutic equipment and physiotherapy procedures, in accordance with its instructions **PC-6 ID-2** To **be able to** fix animals to ensure safety during medical procedures **PC-6 ID-3** To **be able to** maintain patients documentation on diseases and treatment of animals, using digital technologies **PC-6 ID-4** To **know** the types of non-drug therapy, including physiotherapy, used in veterinary medicine, and the clinical signs for its use **PC-6 ID-5** To **know** the safety rules of manipulation with special equipment during non-drug instrumentation for the animals. **PC-6 ID-6** To **know** the methods and techniques of non-drug manipulations for the animal. **PC-6 ID-7** To **know** the methods of animals fixation during treatment. **PC-6 ID-8** To **know** forms and rules for filling out the journal for the registration of sick animals and the animal's medical history in accordance with the requirements of veterinary legislation, in digital format as well. |
| | **PC-7.** Statement of the necessity of surgical techniques application for the animals' treatment, development of a surgical operation plan, including the method of anesthesia. | **PC-7 ID-1** To **be able to** anesthetize animals before surgery using narcotic, neuroleptic and local anesthetic drugs **PC-7 ID-2** To **know** the surgical methods of animal treatment and indications for its appliance. **PC-7 ID-3** To **know** drugs used to anesthetize animals in veterinary surgery. doses and methods of its administration, side effects |
| | **PC-8.** Application of surgical manipulations for the treatment of various animals diseases, castration, sterilization for cosmetic indications. | **PC-8 ID-1** To **be able to** dissect animal tissues, using surgical instruments in order to create operative access to the affected organ or tissues **PC-8 ID-2** To **be able to** perform surgical manipulation, using surgical instruments, over the affected organ or tissues, thus ensure the effectiveness of surgical treatment. **PC-8 ID-3** |

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| | | **To be able to** stop bleeding using mechanical, physical, chemical and biological methods<br>**PC-8 ID-4**<br>**To be able to** treat tissue in bloodless and bloody ways, drain cavities, apply bandages, using dressings and frame materials<br>**PC-8 ID-5**<br>**To know** the rules of special equipment application at the operating room, surgical instruments and dressings<br>**PC-8 ID-6**<br>**To know** the technique of performing surgical manipulations in veterinary medicine<br>**PC-8 ID-7**<br>**To know** the types and techniques of sutures and bandages, used in veterinary surgery |
| | **PC-9.** Development of recommendations for special feeding of sick animals for therapeutic purposes. | **PC-9 ID-1**<br>**To know** the types of dietary regimes, the principles of feed choice, using digital technologies, norms, feeding regimes in animal diet therapy. |
| | **PC-10.** Application of follow-up examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, detalisation of the animal treatment plan (if necessary) based on the results of the evaluation of the treatment effectiveness. | **PC-10 ID-1**<br>**To be able to** evaluate the effectiveness of treatment<br>**PC-10 ID-2**<br>**To be able to** use specialized information databases when choosing ways for treat animal diseases<br>**PC-10 ID-3**<br>**To know** the methods of drug treatment of sick animals and indications for its use in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals |
| Managing a system of measures to prevent the occurrence of non-contagious, infectious and invasive animal diseases to ensure sustainable animal health | **PC-11.** Design of an annual plan of antiepizootic measures, a plan for the prevention of non-contagious animal diseases, a plan of veterinary and sanitary measures | **PC-11 ID-1**<br>**To be able to** collect and analyze information, including veterinary statistics data, necessary for planning preventive antiepizootic measures, prevention of non-contagious animal diseases, veterinary and sanitary measures<br>**PC-11 ID-2**<br>**To know** the methods of collecting and analyzing information for veterinary planning, using information databases as well. |
| | **PC-12.** Organization of the preventive clinical studies of animals, control of the veterinary and sanitary conditions and microclimate of livestock premises in accordance with the plan of antiepizootic measures, plan of the prevention of non-contagious animal diseases. plan of veterinary and sanitary measures | **PC-12 ID-1**<br>**To be able to** carry out clinical studies of animals, using digital technologies as part of the implementation of action plans for the prevention of animal diseases<br>**PC-12 ID-2**<br>**To be able to** assess the impact of animal welfare and feeding conditions on health parameters as part of the implementation of action plans for the prevention of animal diseases<br>**PC-12 ID-3**<br>**To be able to** carry out veterinary quality control over the procurement of animal feed in order to ensure its veterinary and sanitary safety as part of the implementation of action plans for the prevention of animal diseases<br>**PC-12 ID-4**<br>**To know** the recommended forms of the plan of antiepizootic measures, the plan of prevention of non-contagiouse animal diseases, the plan of veterinary and sanitary measures<br>**PC-12 ID-5**<br>**To know** the procedure for conducting internal control of the veterinary and sanitary conditions of the facilities |

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| | | and the microclimate of livestock premises, using digital equipment<br>**PC-12 ID-6**<br>**To know** the normative indicators of microclimate parameters in livestock premises |
| | **PC-13.** Development of the enterprise protection measures from the introduction of infectious and invasive diseases in accordance with the plan of antiepizootic measures | **PC-13 ID-1**<br>**To know** the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine |
| | **PC-14.** Development of preventive immunization (vaccination), therapeutic and preventive treatments of animals in accordance with the plan of antiepizootic measures, analysis of the effectiveness of the measures for the prevention of animal diseases and its improvement | **PC-14 ID-1**<br>**To be able to** evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well<br>**PC-14 ID-2**<br>**To know** the procedure for conducting a clinical study of animals when planning preventive measures<br>**PC-14 ID-3**<br>**To know** the types of antiepizootic measures and the requirements for their implementation in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals |
| | **PC-15.** Management of organizational, technical, zootechnical and veterinary measures for the prevention of non-contagiouse diseases in accordance with the preventive plan, analysis of the effectiveness of measures for the prevention of animal diseases for its improvement | **PC-15 ID-1**<br>**To be able to** assess the impact of animal welfare and feeding conditions on its health as part of the implementation of action plans for the prevention of animal diseases using digital technologies<br>**PC-15 ID-2**<br>**To be able to** evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well.<br>**PC-15 ID-3**<br>**To be able to** carry out veterinary quality control and procurement of animal feed in order to ensure its veterinary and sanitary safety as part of the implementation of action plans for the prevention of animal diseases<br>**PC-15 ID-4**<br>**To be able to** perform diagnostic examination of animals within the framework of medical examination for early detection of disease preclinical and clinical signs.<br>**PC-15 ID-5**<br>**To know** the types of measures for the prevention of non-contagious animal diseases and metabolic disorders in animals and the requirements for its implementation, in accordance with methodological guidelines, instructions, manuals, rules for the diagnosis, prevention and treatment of animals |
| | **PC-16.** Organization of disinfection measures of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of measures for the prevention of animal diseases in order to improve them. | **PC-16 ID-1**<br>**To be able to** assess the effectiveness of preventive measures and ways to implement them, including digital technologies<br>**PC-16 ID-2**<br>**To know** the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine |

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| | **PC-17**. Drawing up a plan for the medical examination of animals, taking into account its husbandry type, veterinary examinations in order to preserve the health of animals and increase its productivity, development of recommendations for preventive and treatment measures, based on the results of animal study, conducted as part of the veterinary examination. | **PC-17 ID-1**<br>**To be able to** perform diagnostic examination of animals within the framework of veterinary study with the use of digital equipment, for early detection of preclinical and clinical signs of the disease<br>**PC-17 ID-2**<br>**To know** the methodology of veterinary examination of animals in accordance with the actual methodological guidelines<br>**PC-17 ID-3**<br>**To know** the types of preventive measures of non-contagious animal diseases and metabolic disorders and the requirements for its implementation in accordance with methodological guidelines, instructions, manuals, rules for the diagnosis, prevention and treatment of animals |
| | **PC-18.** Is able to carry out veterinary and sanitary expertise, manage the production and certification of livestock products, beekeeping, aquatic fisheries and feed, as well as transport rules of animals and goods during export and import operations to ensure food safety, carry out a sanitary assessment of livestock facilities and structures | **PC-18 ID-1**<br>**To be able to** carry out veterinary and sanitary pre-slaughter inspection of animals and poultry, post-slaughter veterinary and sanitary examination of carcasses and organs; correctly assess the quality and control of agricultural output; assess the condition of controlled products according to organoleptic properties and laboratory results using digital technologies, control the operating parameters of all links in the processing of livestock raw materials; organize and control transportation of slaughtered animals, raw materials, products of animal and vegetable origin; to determine the species of animal meat; to carry out bacteriological analysis of meat and its products; to use methods of technochemical control of canned products of animal and vegetable origin.<br>**PC-18 ID-2**<br>**To know** the government standards in the field of veterinary and sanitary expertise and control of the production of safe livestock products, keeping, aquatic fisheries and feed, as well as plant products; rules for veterinary and sanitary examination and quality control of food of animal origin; preventive measures of zoonoses; modern means and methods of disinfection, disinsection and deratization of slaughterhouses and meat processing enterprises; norms and rules for the organization and control of transportation of animals, raw materials, products of animal origin, bee products and aquatic fisheries; biology and life cycles of animals that cause zoonoses, as well as factors of its infection; basic concepts and terms in the field of controling the quality of animal slaughter products, its chemical composition, nutritional value, quality factors. |
| | PC-19. Is able to organize monitoring studies using big data processing systems and artificial intelligence in professional activities. | PC-19 ID-1<br>**To know** the software packages for automatic management of veterinary documentation.<br>PC-19 ID-2<br>**To have the skills** to work with large amounts of veterinary documentation.<br>PC-19 ID-3<br>**To possess knowledge** in the field of artificial intelligence and data analysis. |

## 2. DESCRIPTION OF INDICATORS AND CRITERIA FOR ASSESSING COMPETENCIES AND ASSESSMENT SCALES

| Planned results of mastering the competency | Mastery level | | | | Estimated tool |
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| | Unsatisfactory | Satisfactorily | Good | Excellent | |
| UC-1- Is able to carry out a critical analysis of problematic situations based on a systematic approach, to develop a strategy for manipulation | | | | | |
| UC-1 ID-1 **To know** methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-1 ID-2 **To be able to** gain new knowledge based on analysis, synthesis, etc.; collect and summarize data on current scientific problems, related to the professional field; search for information and solutions based on actions, experiment, experience, and information and communication technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| UC-1 ID-3 **To possess skills** of evaluation of the problem of professional activity with the analyze of synthesis and other methods of intellectual activity, including the use of information and communication technologies; identification of problems and the use of adequate methods to solve them; demonstration of value judgments to solve problematic professional situations. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-2. Is able to manage the project at all stages of life cycle | | | | | |
| UC-2 ID-1 **To know** methods of presentation and description of the project activities results; methods, criteria and parameters for evaluation of the results of project implementation; principles, methods and requirements for project work | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |

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| **UC-2 ID-2**<br>**To be able to**: substantiate the theoretical and practical significance of the results obtained; check and analyze project documentation; predict the development of processes in the project professional field; put forward innovative ideas and non-standard approaches to its solution in order to implement the project; calculate qualitative and quantitative results, deadlines for project work. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| **UC-2 ID-3**<br>**To possess skills of:** project management in the field of relevant professional activity: assignment of tasks and motivation to achieve goals; management of the development of the project's terms of reference, management of the implementation of specialized project work, its negotiation and datalisation; participation in the development of the project's terms of reference. Development of the project implementation program in the professional field; organization of professional discussion of the project, participation in the management of project documentation; design of the project implementation schedule; definition of the requirements for the results of the project. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-3. Is able to organize and manage the work of the team, developing a team strategy to achieve the set goal | | | | | |
| **UC-3 ID-1**<br>**To know** the ways of selecting an effective team; the basic conditions for effective teamwork; the basics of strategic human resource management, regulatory legal acts related to the organization and implementation of professional activities; models of organizational behavior; combining factors of organizational relations; strategies and principles of teamwork, the main characteristics of the organizational behavior and interaction of team members in the organization. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |

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| UC-3 ID-2<br>**To be able to**: determine the management style and effectiveness of team management; develop a team strategy; apply the principles and methods of organizing team activities; choose methods and techniques for researching professional practical tasks. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| UC-3 ID-3<br>**To possess skills** to use team building for realisation set goals; to creat team to perform practical tasks; to participate in the development of a teamwork strategy; of the ability to work in a team. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-4. Is able to apply modern communication technologies, also in a foreign language(s), for academic and professional interaction | | | | | |
| **UC-4 ID-1**<br>**To know**: computer technologies and information media of the organization work; communication in professional ethics; factors for improvement of the team communication, communication technologies in professional interaction; characteristics of communication flows; the importance of communication in professional interaction; research methods of the communicative potential of the individual; modern means of information and communication technologies | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-4 ID-2<br>**To be able to**: create written texts of scientific and official business speech styles on professional issues in Russian and foreign languages; explore the passage of information on management communications; determine internal communications in the organization, including using digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |

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| UC-4 ID-3<br>**To possess skills of** the principles of forming a communication system; analyze the system of communication links in the organization by carrying out oral and written communications, including in a foreign language: presentation of plans and results of their own and team activities, using communication technologies; technology for building effective communication in the organization; transfer of professional skills in information and telecommunication networks; use of modern means of information and communication technologies | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-5. Is able to analyze and take into account the diversity of cultures in the process of intercultural interaction. | | | | | |
| UC-5 ID-1<br>**To know**: the psychological foundations of social interaction aimed at solving professional tasks; the basic principles of organization business contacts; methods of preparation for negotiations, national, ethno-cultural and confessional characteristics and folk traditions of the population; the basic concepts of interaction in the organization, the features of didactic interaction. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-5 ID-2<br>**To be able to**: present professional information in complete and in an accessible manner during the process of intercultural interaction; observe ethical norms and human rights; analyze the features of social interaction, taking into account national, ethno-cultural and confessional characteristics. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |

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| UC-5 ID-3 **To possess skills of**: the organization of productive interaction in a professional environment, taking into account national, ethno-cultural, confessional characteristics; overcoming communicative, educational, ethnic, confessional and other barriers in the process of intercultural interaction; identification of cultural diversity in the process of intercultural interaction. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-6. Is able to determine and implement the private priorities activities and ways to improve them based on self-assessment and life along education | | | | | |
| UC-6 ID-1 **To know**: the content of the processes of self-organization and self-education, its features and technologies of implementation, based on the goals of improving professional activity**.** | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-6 ID-2 **To be able to** build the self process of mastering selected and structured information, including digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| UC-6 ID-3 **To possess skills of**: techniques of self-regulation of psycho-emotional and functional status. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |

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| colspan="6" | **UC-7. Is able to maintain an adequate level of physical fitness to ensure full-fledged social and professional activities** | | | | |
| UC-7 ID-1 <br> **To know**: basic means and methods of physical education. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-7 ID-2 <br> **To be able to**: select and apply methods and means of physical culture to improve basic physical qualities. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| UC-7 ID-3 <br> **To possess skills of**: methods and means of physical culture to ensure full-fledged social and professional activities. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| **UC-8. Is able to create and maintain safe living conditions, including cases of emergency situations** | | | | |
| UC-8 ID-1 <br> **To know**: the consequences of harmful and dangerous factors exposure on the body of animals, humans and the natural environment, methods of protection from emergencies and military conflicts; fundamentals of life safety, telephone numbers of rescue services. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |

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| UC-8 ID-2<br>**To be able to**: identify the signs, causes and conditions of emergencies and military conflicts; assess the likelihood of a potential danger to the student and take measures to prevent it in an educational institution; provide first aid in emergency situations. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| UC-8 ID-3<br>**To possess skills of**: the ways to ensure safety in the human-animal-habitat system. Possess methods of forecasting the occurrence of dangerous or emergency situations; skills in maintaining safe living conditions, including those based on digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-9. Is able to make informed economic decisions in various areas of life | | | | | |
| UC-9 ID-1<br>**To know**: the conceptual apparatus of economic science, the basic principles of the functioning of the economy, the goals and mechanisms of the main types of social economic policy. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-9 ID-2<br>**To be able to**: use methods of economic and financial planning to achieve the set goal, including digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |

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| UC-9 ID-3<br>**To possess skills of**: the use of economic tools for financial management, with the use of digital technologies as well, taking into account economic and financial risks in various areas of life. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| UC-10. Is able to form an intolerant attitude towards manifestations of extremism, terrorism, and corrupt behavior and counteract them in profes- sional activities. | | | | | |
| UC-10 ID-1<br>**To know**: the basic terms and concepts of civil law used in anti-corruption legislation, the current anti-corruption legislation and the practice of its application, the legal framework for countering terrorism and extremism | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| UC-10 ID-2<br>**To be able to**: interpret correctly the civil law terms with the use of digital technologies as well, used in anti-corruption legislation; assess corrupt behavior and apply anti-corruption legislation in practice, analyze factors contributing to extremism, terrorism as a particularly dangerous socio-legal phenomenon | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| UC-10 ID-3<br>**To possess skills of**: correct behavior interpretation, with the use of digital technologies, as well, civil law terms used in anti-corruption legislation, basics of application of anti-corruption legislation in practice, the skills to assess various phenomena of public life in order to identify signs of extremism and terrorism. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-1. Is able to determine the biological status, normal clinical signs of organs and systems of the animal body. | | | | | |
| GPC-1 ID-1<br>**To know**: safety precautions and personal hygiene rules during the examination of animals, methods of its fixation; schemes of clinical examination of an animal and the procedure for examination individual body systems; methodology for diagnosis of the pathological process | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-1 ID-2<br>**To be able to**: collect and analyze anamnesis data, conduct laboratory and functional studies, necessary to determine the animal biological status. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |

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| GPC-1 ID-3<br>**To possess practical skills**: for conducting on its own a clinical examination of an animal, using classical research methods and digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-2. Is able to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on the physiological status of the animal body. | | | | | |
| GPC-2 ID-1<br>**To know**: ecology factors of the environment, its classification and the nature of relationships with living organisms; basic ecological concepts; interspecific relations of animals and plants, terms and bio ecology laws, parasites and hosts; ecological features of some types of pathogenic microorganisms; mechanisms of influence of anthropogenic and economic factors on the animal body. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-2 ID-2<br>**To be able to**: use environmental factors and environmental laws in agricultural manufacture; apply the achievements of modern microbiology and ecology of microorganisms in animal husbandry and veterinary medicine in order to prevent infectious and invasive diseases and treat animals; use environmental monitoring methods in the environmental assessment of agricultural facilities and the production of agricultural products; assess the impact on the animal body, anthropogenic and economic factors | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| GPC-2 ID-3<br>**To possess skills of**: the knowledge of the origin of living organisms, the levels of organization of living matter, favorable and unfavorable factors affecting the body; the basis for studying environmental knowledge of the environment, the laws of the development of nature and society; skills of observation, comparative analysis, historical and experimental modeling of the impact of anthropogenic and economic factors on living objects, with the use of digital technologies as well. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-3. Is able to carry out and improve professional activities in accordance with regulatory legal acts in the field of agro-industrial complex. | | | | | |

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| GPC-3 ID-1 **To know**: the basics of national and international veterinary legislation, specific rules and regulations, governing veterinary activities at the local, national and international levels. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-3 ID-2 **To be able to::** find up to-date, relevant and reliable information about veterinary legislation, rules and regulations governing veterinary activities in a particular region and/or country. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| GPC-3 ID-3 **To possess skills of:** the legal framework and ethical standards in the implementation of professional activities. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-4. Is able to use methods to solve problems, using modern equipment for the development of new technologies in professional activity and use modern professional methodology to conduct experimental research and interpret the results. | | | | | |
| GPC-4 ID-1 **To know**: the technical capabilities of modern specialized equipment, methods of problems resolution in professional activity. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-4 ID-2 **To be able to**: apply modern technologies and research methods in professional activities, interpret the results obtained. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| GPC-4 ID-3 **To possess skills of**: the work with specialized equipment for implementation of the set tasks for research and the development of new technologies, digital ones, as well. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-5. Is able to draw up special documentation, analyze the results of professional activity and submit accounting docu- ments, using specialized databases. | | | | | |

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| GPC-5 ID-1<br>**To know**: modern software, basic system software products and application software packages; technical means of implementation information processes | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-5 ID-2<br>**To be able to**: apply new information technologies to solve tasks in professional activity, work with specialized information databases. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| GPC-5 ID-3<br>**To possess skills of**: the work with the operating system, text and table processors, database management systems, information search systems on the Internet. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-6. Is able to analyze, identify and assess the risk danger of the occurrence and spread of the disease. | | | | | |
| GPC-6 ID-1<br>**To know**: existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control by the relevant veterinary services. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-6 ID-2<br>**To be able to**: assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| GPC-6 ID-3<br>**To possess skills to**: conduct identification procedures, select and implement measures that can be used to reduce the risk level**.** | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| GPC-7. Is able to understand the principles of modern information technologies and use them to solve professional tasks | | | | | |

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| GPC-7 ID-1<br>**To know**: modern technical means and information technologies | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| GPC-7 ID-2<br>**To be able to**: use modern technical means and information technologies, including elements of machine learning and artificial intelligence to solve analytical and research problems. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| GPC-7 ID-3<br>**To possess skills to:** use modern technical means and information technologies to solve analytical and research problems. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | There is a minimal set of skills for solving standard tasks, with some shortcomings | Basic skills are demonstrated in solving standard tasks, with some shortcomings. | Demonstrated skills in solving non-standard tasks, without errors or shortcomings. | Preparation for and Passing of the State Final Examination |
| PC-1. Anamnesis of animal life and disease to identify the cause of disease, conduct a general clinical study of animals in order to establish a preliminary diagnosis and determine the ongoing research program | | | | | |
| PC-1 ID-1-ID-5<br>**To be able to** collect and analyze information about the origin and purpose of animals, the method and conditions of husbandary, feeding (anamnesis of animal life), including use of sensor devices, mechanisms, sensors, tags, etc.; collect and analyze information about the occurrence and manifestation of animals diseases, previously transmitted diseases, epizootological conditions (anamnesis of animal disease), with the use of sensor devices, mechanisms, sensors, tags, etc.; fix animals to ensure safety during a clinical trial; perform a clinical examination of animals, using common methods: examination, palpation, percussion, auscultation and thermometry; establish a preliminary diagnosis based on anamnesis analysis and clinical research, using general methods. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-1 ID-6-ID-10<br>**To know** the method of collecting animals anamnesis of life and disease; the factors of animal life that contribute to | The level of knowledge is below the minimum | The minimum acceptable level of | The level of knowledge meets the scope of the training | The level of knowledge meets the scope of the training | Preparation for and Passing of |

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| the occurrence of infectious and non-infectious diseases; the forms and rules for filling out the journal for the registration of sick animals and the animal's medical history, including in electronic form in accordance with the requirements of veterinary rules; the methods of animals' fixation during clinical examination; the technique of conducting an animal clinical study, using general methods, in accordance with the guidelines, instructions, rules for the diagnosis, prevention and treatment of animals. | requirements, with gross errors present | knowledge, with many blunders made. | program, with several minor mistakes made. | program, with no errors | the State Final Examination |
| **PC-2. Development of an animal research program and conduction of clinical study, using special (instrumental) and laboratory methods to clarify the diagnosis** | | | | | |
| PC-2 ID-1-ID-6 **To be able to** study animals, using digital equipment and special (instrumental) methods, including endoscopy, probing, catheterization, radiography, electro cardiography, echography; interpret and analyze data from special (instrumental) animal research methods to verify the diagnosis; determine the reaction of the cardiovascular system of animals to various loads by the method of functional tests; take samples of animal biological material for laboratory research; perform analytical preparation, storage of the studied biological material, transportation to the laboratory; interpret and analyze data from laboratory animal research methods for diagnosis. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-2 ID-7-ID-12 **To know** the indication for the use of digital equipment, special (instrumental) and laboratory methods of animal research in accordance with the guidelines, instructions, rules for the diagnosis, prevention and treatment of animals; the safe rules of operation with digital equipment, tools and equipment, used in special (instrumental) animal studies, including X-ray examinations; the technique of the animal study, using digital equipment and special (instrumental) methods in accordance with methodological guidelines, instructions, rules for the diagnosis, prevention and treatment of animals; the methods and techniques of administration diagnostic and radiopaque substances for the animal; the technique of setting functional tests for animals; | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |

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| the methodology of sampling and analytical fullfilment of biological material samples for execution of laboratory analyses in accordance with the instructions and methodological documents, regulating the sampling of biological material | | | | | |
| PC-3. To set the diagnose based on the analysis of anamnesis, general, special (instrumental) and laboratory research methods | | | | | |
| PC-3 ID-1-ID-3 **To possess skills to** make a diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; use specialized information databases for the diagnosis of animal diseases; document the results of clinical animal studies, using digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-3 ID-4-ID-7 **To know** the methods of interpretation and data analysis of special (instrumental) methods of animal examination; the norms of indicators of the status of animals' biological material of different species and the reasons that cause deviations from the norms; the etiology and pathogenesis of animal diseases of various species; the generally accepted criteria and classifications of animal diseases, approved lists of animals disease. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-4. To perform postmortem diagnostic examination of animals in order to establish pathological processes, diseases, cause of death | | | | | |
| PC-4 ID-1-ID-6 **To be able to** collect the anamnesis of life and disease of the examined animals after death; perform a general examination of animal cadaver before autopsy; perform autopsy of animal cadaver, using special tools and in compliance with safety requirements; carry out the selection and fixation of samples of pathological material for laboratory research, using digital technologies; establish the cause of death and a patho-anatomical diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases; document the results of the animal postmortem diagnostic examination in the autopsy protocol, including digital technologies. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-4 ID-7-ID-11 | The level of knowledge is below | The minimum acceptable level of | The level of knowledge meets the | The level of knowledge meets the | Preparation for and Passing of |

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| **To know** the veterinary and sanitary requirements for the process of animals cadaver dissection, in accordance with the legislation of the Russian Federation in the field of veterinary medicine; the rules of work with special tools for dissection of animal cadaver; the methods and techniques of autopsy of animals cadaver of various species; the methodology of sampling and fixation of pathological material for laboratory research. in accordance with the rules in this field; the forms and procedure for fulfillment of an autopsy protocol of an animal, including digital technologies. | the minimum requirements, with gross errors present | knowledge, with many blunders made. | scope of the training program, with several minor mistakes made. | scope of the training program, with no errors | the State Final Examination |
| PC-5. To carry out plan of animal treatment, based on the stated diagnosis and animals individual character ristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body. | | | | | |
| PC-5 ID-1-ID-4<br>**To be able to** use specialized information databases at a choice of animal treatment methods; calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period; calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well; administer drugs to the animals body in various techniques. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-5 ID-5-ID-8<br>**To know** the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment; the state register of medicines for veterinary use; the pharmacological and toxicological characteristics of medicinal raw materials, remedies of chemical and biological nature, biologically active additives for the prevention and treatment of animal diseases of various etiology; the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-6. The selection of the variety of methods of non-drug therapy, including physiotherapy methods for the treatment of animals, carry out therapeutic, including physiotherapy procedures using special equipment in compliance with safety rules. | | | | | |

| PC-6 ID-1-ID-3<br>**To be able to** use special, both digital therapeutic equipment and physiotherapy procedures, in accordance with its instructions; fix animals to ensure safety during medical procedures; maintain patients documentation on diseases and treatment of animals, using digital technologies | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
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| PC-6 ID-4-ID-8<br>**To know** the types of non-drug therapy, including physiotherapy, used in veterinary medicine, and the clinical signs for its use; the safety rules of manipulation with special equipment during non-drug instrumentation for the animals; the methods and techniques of non-drug manipulations for the animal; the methods of animals fixation during treatment; forms and rules for filling out the journal for the registration of sick animals and the animal's medical history in accordance with the requirements of veterinary legislation, in digital format as well. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-7. Statement of the necessity of surgical techniques application for the animals' treatment, development of a surgical operation plan, including the method of anesthesia | | | | | |
| PC-7 ID-1<br>**To be able to** anesthetize animals before surgery using narcotic, neuroleptic and local anesthetic drugs | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-7 ID-2-ID-3<br>**To know** the surgical methods of animal treatment and indications for its appliance; drugs used to anesthetize animals in veterinary surgery. doses and methods of its administration, side effects. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-8. Application of surgical manipulations for the treatment of various animals diseases, castration, sterilization for cosmetic indications. | | | | | |
| PC-8 ID-1-ID-4<br>**To be able to** dissect animal tissues, using surgical instruments in order to create operative access to the affected organ or tissues; perform surgical manipulation, using surgical instruments, over the affected organ or tissues, thus ensure the effectiveness of surgical treatment; | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all | Preparation for and Passing of the State Final Examination |

| | | | though some with shortcomings. | tasks have been completed in full. | |
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| stop bleeding using mechanical, physical, chemical and biological methods; treat tissue in bloodless and bloody ways, drain cavities, apply bandages, using dressings and frame materials | | | | | |
| PC-8 ID-5-ID-7 **To know** the rules of special equipment application at the operating room, surgical instruments and dressings; the technique of performing surgical manipulations in veterinary medicine; the types and techniques of sutures and bandages, used in veterinary surgery | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-9. Development of recommendations for special feeding of sick animals for therapeutic purposes. | | | | | |
| PC-9 ID-1 **To know** the types of dietary regimes, the principles of feed choice, using digital technologies, norms, feeding regimes in animal diet therapy. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-10. Application of follow-up examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment, detalisation of the animal treatment plan (if necessary) based on the results of the evaluation of the treatment effectiveness. | | | | | |
| PC-10 ID-1-ID-2 **To be able to** evaluate the effectiveness of treatment; use specialized information databases when choosing ways for treat animal diseases | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-10 ID-3 **To know** the methods of drug treatment of sick animals and indications for its use in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-11. Design of an annual plan of antiepizootic measures, a plan for the prevention of non-contagious animal diseases, a plan of veterinary and sanitary measures | | | | | |
| PC-11 ID-1 **To be able to** collect and analyze information, including veterinary statistics data, necessary for planning preventive antiepizootic measures, prevention of non-contagious animal diseases, veterinary and sanitary measures | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |

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| PC-11 ID-2 **To know** the methods of collecting and analyzing information for veterinary planning, using information databases as well. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-12. Organization of the preventive clinical studies of animals, control of the veterinary and sanitary conditions and microclimate of livestock premises in accordance with the plan of antiepizootic measures, plan of the prevention of non-contagious animal diseases. plan of veterinary and sanitary measures | | | | | |
| PC-12 ID-1-ID-3 **To be able to** carry out clinical studies of animals, using digital technologies as part of the implementation of action plans for the prevention of animal diseases; assess the impact of animal welfare and feeding conditions on health parameters as part of the implementation of action plans for the prevention of animal diseases; carry out veterinary quality control over the procurement of animal feed in order to ensure its veterinary and sanitary safety as part of the implementation of action plans for the prevention of animal diseases | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-12 ID-4-ID-6 **To know** the recommended forms of the plan of antiepizootic measures, the plan of prevention of non-contagiouse animal diseases, the plan of veterinary and sanitary measures; the procedure for conducting internal control of the veterinary and sanitary conditions of the facilities and the microclimate of livestock premises, using digital equipment; the normative indicators of microclimate parameters in livestock premises | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-13. Development of the enterprise protection measures from the introduction of infectious and invasive diseases in accordance with the plan of antiepizootic measures | | | | | |
| PC-13 ID-1 **To know** the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-14. Development of preventive immunization (vaccination), therapeutic and preventive treatments of animals in accordance with the plan of antiepizootic measures, analysis of the effectiveness of the measures for the prevention of animal diseases and its improvement | | | | | |
| PC-14 ID-1 **To be able to** evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all | Preparation for and Passing of the State Final Examination |

| | | tasks were completed but not in full. | completed in full, though some with shortcomings. | tasks have been completed in full. | |
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| PC-14 ID-2-ID-3<br>**To know** the procedure for conducting a clinical study of animals when planning preventive measures; the types of antiepizootic measures and the requirements for their implementation in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-15. Management of organizational, technical, zootechnical and veterinary measures for the prevention of non-contagiouse diseases in accordance with the preventive plan, analysis of the effectiveness of measures for the prevention of animal diseases for its improvement | | | | | |
| PC-15 ID-1-ID-4<br>**To be able to** assess the impact of animal welfare and feeding conditions on its health as part of the implementation of action plans for the prevention of animal diseases using digital technologies; evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well; carry out veterinary quality control and procurement of animal feed in order to ensure its veterinary and sanitary safety as part of the implementation of action plans for the prevention of animal diseases; perform diagnostic examination of animals within the framework of medical examination for early detection of disease preclinical and clinical signs. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-15 ID-5<br>**To know** the types of measures for the prevention of non-contagious animal diseases and metabolic disorders in animals and the requirements for its implementation, in accordance with methodological guidelines, instructions, manuals, rules for the diagnosis, prevention and treatment of animals | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-16. Organization of disinfection measures of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of measures for the prevention of animal diseases in order to improve them | | | | | |
| PC-16 ID-1<br>**To be able to** assess the effectiveness of preventive measures and ways to implement them, including digital technologies | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all | Preparation for and Passing of the State Final Examination |

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| | | tasks were completed but not in full. | completed in full, though some with shortcomings. | tasks have been completed in full. | |
| PC-16 ID-2 **To know** the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-17. Drawing up a plan for the medical examination of animals, taking into account its husbandry type, veteri nary examinations in order to preserve the health of animals and increase its productivity, development of recommendations for preventive and treatment measures, based on the results of animal study, conducted as part of the veterinary examination. | | | | | |
| PC-17 ID-1 **To be able to** perform diagnostic examination of animals within the framework of veterinary study with the use of digital equipment, for early detection of preclinical and clinical signs of the disease | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-17 ID-2-ID-3 **To know** the methodology of veterinary examination of animals in accordance with the actual methodological guidelines; the types of preventive measures of non-contagious animal diseases and metabolic disorders and the requirements for its implementation in accordance with methodological guidelines, instructions, manuals, rules for the diagnosis, prevention and treatment of animals | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-18. Is able to carry out veterinary and sanitary expertise, manage the production and certification of livestock products, beekeeping, aquatic fisheries and feed, as well as transport rules of animals and goods during export and import operations to ensure food safety, carry out a sanitary assessment of livestock facilities and structures | | | | | |
| PC-18 ID-1 **To be able to** carry out veterinary and sanitary pre-slaughter inspection of animals and poultry, post-slaughter veterinary and sanitary examination of carcasses and organs; correctly assess the quality and control of agricultural output; assess the condition of controlled products according to organoleptic properties and laboratory results using digital technologies, control the operating parameters of all links in the processing of livestock raw materials; organize and control transportation of slaughtered animals, raw materials, | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |

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| products of animal and vegetable origin; to determine the species of animal meat; to carry out bacteriological analysis of meat and its products; to use methods of technochemical control of canned products of animal and vegetable origin | | | | | |
| PC-18 ID-2<br>**To know** the government standards in the field of veterinary and sanitary expertise and control of the production of safe livestock products, keeping, aquatic fisheries and feed, as well as plant products; rules for veterinary and sanitary examination and quality control of food of animal origin; preventive measures of zoonoses; modern means and methods of disinfection, disinsection and deratization of slaughterhouses and meat processing enterprises; norms and rules for the organization and control of transportation of animals, raw materials, products of animal origin, bee products and aquatic fisheries; biology and life cycles of animals that cause zoonoses, as well as factors of its infection; basic concepts and terms in the field of controling the quality of animal slaughter products, its chemical composition, nutritional value, quality factors. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-19. Is able to organize monitoring studies using big data processing systems and artificial intelligence in professional activities. | | | | | |
| PC-19 ID-1<br>**To know** the software packages for automatic management of veterinary documentation. | The level of knowledge is below the minimum requirements, with gross errors present | The minimum acceptable level of knowledge, with many blunders made. | The level of knowledge meets the scope of the training program, with several minor mistakes made. | The level of knowledge meets the scope of the training program, with no errors | Preparation for and Passing of the State Final Examination |
| PC-19 ID-2<br>**To have the skills** to work with large amounts of veterinary documentation. | Basic skills were not demonstrated when solving standard tasks, and gross errors were made | Basic skills have been demonstrated; typical tasks were solved with minor errors, and all tasks were completed but not in full. | All basic skills have been demonstrated; all basic tasks were solved with minor errors, and all tasks were completed in full, though some with shortcomings. | All basic skills have been demonstrated, all basic tasks have been solved with minor shortcomings, and all tasks have been completed in full. | Preparation for and Passing of the State Final Examination |
| PC-19 ID-3 | The level of knowledge is below | The minimum acceptable level of | The level of knowledge meets the | The level of knowledge meets the | Preparation for and Passing of |

| To possess knowledge in the field of artificial intelligence and data analysis. | the minimum requirements, with gross errors present | knowledge, with many blunders made. | scope of the training program, with several minor mistakes made. | scope of the training program, with no errors | the State Final Examination |
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**3.** **STANDARD CONTROL TASKS OR OTHER MATERIALS NECESSARY FOR EVALUATING THE RESULTS OF MASTERING THE EDUCATIONAL PROGRAM LIST OF QUESTIONS FOR THE STATE EXAMAMINATION**

SPECIALTY 36.05.01 VETERINARY MEDICINE
full-time, part-time (evening), correspondence forms of education

## Discipline "Internal non-communicable diseases"

1. Medical examination: goals and objectives. The stages of the main and current medical examinations. Features of medical examinations in industrial complexes.
2. Nonspecific bronchopneumonia and its features of manifestation in young animals in livestock complexes. The influence of violations of zoohygienic conditions of detention on its occurrence and course.
3. Dyspepsia in newborn animals. Etiology and pathogenesis. The influence of violations of zoohygienic factors on its occurrence and course.
4. Myocarditis: causes, pathogenesis, symptoms, diagnosis, treatment, and prevention.
5. Traumatic reticulitis and pericarditis. Etiology, pathogenesis, clinical manifestation, diagnosis, and methods of active prevention in cattle.
6. Blockage of the esophagus: diagnosis, methods of prevention, and therapy of sick animals.
7. Tympanum of the scar: classification, etiology, pathogenesis, clinical manifestation, diagnosis, and therapy of sick animals.
8. Emphysema of the lungs in animals: etiology, pathogenesis, symptoms, diagnosis, treatment, and prevention.
9. Features of digestion in ruminants. Hypotension and atony of the pancreas: etiology, pathogenesis, symptoms, diagnosis, and methods of therapy in sick animals.
10. Stress and its classification. General adaptation syndrome and its phases. Therapeutic and preventive measures.
11. Acute enlargement of the stomach: diagnosis, therapy of sick animals, and prevention.
12. Kidney disease syndromes. Nephritis and nephrosis: etiology, clinical manifestation, diagnosis, and treatment.
13. Liver diseases (classification and syndromes). Hepatitis: etiology, pathogenesis, symptoms, diagnosis, treatment, and prevention.
14. Microelementoses: classification. Diseases of agricultural animals associated with a lack of cobalt and copper: etiology, pathogenesis, symptoms, diagnosis, and treatment.
15. Poisoning (classification, syndromes). Poisoning with nitrates and nitrites: etiology, clinical manifestation, diagnosis, and treatment.

## Discipline "Parasitology and Invasive Diseases"

1. Babesiosis of cattle.
2. Animal toxoplasmosis.
3. Eimeriosis of birds.
4. Fascioliasis of animals.
5. Opisthorchiasis of animals.
6. Monieziosis of ruminants.
7. Cysticercosis of cattle.
8. Pig cysticercosis.
9. Echinococcosis of animals.

10. Pig ascariasis.
11. Toxocariasis of carnivores.
12. Dictyocaulosis of cattle.
13. Animal trichinosis.
14. Hypodermatosis of cattle.
15. Animal chorioptosis.
16. Pig sarcoptosis.

## Discipline "Epizootology and Infectious Diseases"

1. List and characterize the methods of diagnosing infectious diseases.
2. Define the infectious process and infectious disease.
3. List and characterize the links of the epizootic chain and the driving forces of the epizootic process.
4. Allergic diagnostic tests and their importance in diagnosing and determining the epizootic situation.
5. Rules for the collection and preservation of pathological material samples. Sampling procedures during an animal's lifetime and postmortem.
6. Goals and objectives of an epizootiological examination on a farm unaffected by an infectious disease. Order and rules of the procedure.
7. Define quarantine and recreational activities.
8. Define natural immunity. Explain artificial immunity, its types, and role in the system of antiepizootic measures.
9. Advantages and disadvantages of vaccine prophylaxis. Its role in preventing and eliminating infectious diseases.
10. Disinfection – its significance in antiepizootic measures. Quality control.
11. Anthrax: etiology, pathogenesis, and diagnostic methods.
12. Foot-and-mouth disease: features of its manifestation in different animal species and diagnostic methods.
13. Tuberculosis: system of preventive measures.
14. Brucellosis: general and specific prevention. Importance of vaccination in preventive measures.
15. Rabies: selection of pathological material, laboratory diagnostic methods, and their characteristics.
16. African swine fever: health-improving measures when detected on a farm.
17. Dermatomycosis: preventive measures.
18. Bovine leukemia: diagnostic methods and health-improving measures when detected on a farm.
19. Infectious rhinotracheitis, parainfluenza-3, and viral diarrhea in cattle: general and specific preventive and health-improving measures.
20. Antiepizootic measures for infectious diseases.

## Discipline "Clinical Diagnostics"

1. Basic clinical methods for animal research.
2. Clinical examination plan for an animal.
3. Examination of the pancreas in ruminants.

4. Coprological research.
5. Importance of percussion and auscultation in lung examination.
6. Examination of the heart (percussion, auscultation, ECG).
7. Examination of the urinary system.
8. Urinalysis and its clinical significance.
9. Clinical blood test.
10. Examination of the nervous system.

## Discipline "Veterinary and Sanitary Expertise"

1. Veterinary and sanitary examination and evaluation of meat and slaughter products; measures taken upon detection of an anthrax carcass.
2. Differences between the meat of healthy animals and that of sick, fallen, or agonally slaughtered animals.
3. Determination of meat type.
4. Veterinary and sanitary examination and assessment of fish with invasive diseases hazardous to humans.
5. Methods of neutralization and procedures for using conditionally edible meat.
6. The lymphatic system and its significance in veterinary examination of carcasses and organs of slaughtered animals. Topography of lymph nodes in cattle.
7. Veterinary and sanitary examination and evaluation of animal slaughter products for cysticercosis.
8. Organization and methodology of post-slaughter veterinary and sanitary examination of meat and pig slaughter products in the primary processing workshop.
9. Meat freshness testing.
10. Veterinary and sanitary examination of honey in food markets.
11. Veterinary and sanitary examination and evaluation of slaughter products and milk from animals affected by tuberculosis.
12. Veterinary and sanitary examination and assessment of carcasses and organs for the detection of Salmonella bacteria and opportunistic microflora.
13. Veterinary branding of meat.
14. Fish freshness testing.
15. Veterinary and sanitary examination and evaluation of meat for trichinosis.

## Discipline "Obstetrics and Gynecology"

1. Postpartum paresis: etiology, diagnosis, treatment, and prevention.
2. Uterine subinvolution: etiology, diagnosis, treatment, and prevention.
3. Postpartum period monitoring.
4. Pathological childbirth and principles of obstetrics.
5. The sexual cycle in female animals and its importance in herd reproduction.
6. Timing of cow insemination after calving and during estrus.
7. Non-infectious abortion: classification, diagnosis, and prevention.
8. Infertility in female farm animals: etiology, classification, and diagnosis.
9. Organization and implementation of artificial insemination in female farm animals.
10. Retained placenta: etiology, treatment, and prevention.
11. Gynecological examination and herd reproduction analysis.

12. Mastitis in cows: etiology, diagnosis, and treatment.
13. Vestibulovaginitis, cervicitis, and endometritis: etiology, diagnosis, treatment, and prevention.
14. Ovarian diseases in cows: classification, diagnosis, and treatment principles.
15. Pregnancy diagnosis in animals.


## Discipline "General and Private Surgery"
1. Cattle injuries: etiology, clinical manifestation, and prevention.
2. Diseases of the corolla and interdigital cleft: etiology, clinical manifestation, treatment, and prevention.
3. Diseases of the eyelids and conjunctiva: etiology, clinical manifestation, treatment, and prevention.
4. Post-gastric complications: etiopathogenesis, treatment, and prevention.
5. Bursitis in the carpal joint: etiology, diagnosis, treatment, and prevention.
6. Peritonitis: etiology, diagnosis, treatment, and prevention.
7. Closed soft tissue injuries (bruises, hematomas, lymphoextravasates): etiology, clinical manifestation, and treatment.
8. Rheumatic hoof inflammation in horses.
9. Bone fractures: classification, diagnosis, and treatment.
10. Physiotherapy: methods, indications, and contraindications for heat treatment in surgical diseases.


## Discipline "Pathological Anatomy and Forensic Veterinary Expertise"
1. Morphological characteristics of benign tumors.
2. Morphological characteristics of malignant tumors.
3. Leukemia: definition, etiology, classification, and pathomorphology.
4. Pathological anatomy of hypovitaminosis A, D, and E.
5. Pathological anatomy of tuberculosis and brucellosis in cattle.
6. Pathological anatomy of classical and African swine fever.
7. Pathological anatomy of plague, parvovirus enteritis, and infectious hepatitis in dogs.
8. Pathological anatomy of panleukopenia, infectious peritonitis, and feline calicivirus.
9. Pathological anatomy of viral hemorrhagic disease, pasteurellosis, and rabbit myxomatosis.
10. Pathological anatomy of viral enteritis and plasmacytosis in fur-bearing animals.


## Discipline "Organization of Veterinary Business"
1. Planning veterinary activities. The procedure for drawing up and approving a plan for the elimination of a contagious animal disease.
2. The system of the State Veterinary Service of the Russian Federation and its tasks.
3. Veterinary legislation of the Russian Federation. Responsibility for its violation.
4. State veterinary supervision: its essence, meaning, objects, and methods. Officials of state veterinary supervision.
5. Veterinary entrepreneurship. Veterinary marketing and management. Provision of paid veterinary services.

6. The powers of the Ministry of Agriculture of the Russian Federation regarding regulatory and legal regulation in the field of veterinary medicine.
7. The Federal State Information System in the field of veterinary medicine (FSIS "VetIS"). The automated information system "Mercury".
8. The Federal Service for Veterinary and Phytosanitary Surveillance: its tasks and powers.
9. Veterinary rules for the movement, storage, processing, and disposal of biological waste.
10. Organization of the work of the Animal Disease Control Station (ADCS) and its structural units.
11. Organization of the veterinary business in the subjects of the Russian Federation.

# LIST OF PRACTICAL SKILLS FOR THE STATE EXAMINATION

SPECIALTY 36.05.01 VETERINARY MEDICINE
full-time, part-time (evening), correspondence forms of education
## Discipline "Internal Non-infectious Diseases"

1. Alimentary (iron deficiency) anemia in piglets has been detected on the farm. Carry out therapeutic and preventive measures.
2. Dyspepsia in calves has been detected on the farm. Carry out therapeutic and preventive measures.
3. During a medical examination, ketone bodies were found in the urine of cows. Make a presumptive diagnosis and prescribe treatment.
4. Bronchopneumonia in calves has been detected on the farm. Carry out therapeutic and preventive measures.
5. A cow has tympanum of the scar. How should medical care be provided?
6. A cow has been diagnosed with a blockage of the esophagus. How can the animal be helped?
7. Purpose and technique of trocar puncture of the scar in cattle.
8. Perform diagnostic tests for traumatic damage to the pancreas in a cow. Provide medical assistance and determine preventive measures.
9. Purpose and technique of scar lavage in cattle.

## Discipline "Parasitology and Invasive Diseases"

1. The method of preparing and staining blood smears to confirm the diagnosis of blood parasitic diseases.
2. Name the flotation research methods. In what cases are they applied? Prepare a hypertonic NaCl solution.
3. When examining the fecal masses of representatives of the Felidae family using flotation, sporulated and unsporulated oocysts of different sizes were found. Make a diagnosis. Outline your actions for organizing therapeutic and preventive measures.
4. Methods of laboratory diagnostics in intermediate and final (definitive) hosts with toxoplasmosis.
5. A dairy farm is dysfunctional due to fascioliasis in cattle. The total number of cows on the farm is 580. The veterinary pharmacy has the drug Albendazole, which is used at a dose of 7.5 mg/kg of body weight orally with food. Calculate the annual drug requirement, considering the need for preventive treatment of all cows at least twice a year. The average live weight of one cow is 500 kg.
6. What laboratory diagnostic methods are used to isolate nematode larvae? Describe the essence of these methods.
7. Confirm the diagnosis of oxyuratosis.
8. The technique of collecting and examining biomaterial for scabies.
9. The use of allergic reactions in parasitic diseases.

## Discipline "Epizootology and Infectious Diseases"

1. Draw up an act of epizootological examination of the farm.
2. Methods of diagnosing infectious diseases.
3. The method of conducting an epizootological examination of the farm.

4. The principle of drawing up a plan for antiepizootic measures in a disease-free household.
5. The principle of drawing up a plan for antiepizootic measures in a dysfunctional household.
6. Imposing quarantine and restrictive measures on the farm in case of a specific infectious disease (describe the algorithm).
7. The use of allergens in the diagnosis of tuberculosis and glanders.
8. Prepare a cover for the biomaterial.
9. Draw up an act for disinfection.
10. Draw up a vaccination certificate.


## Discipline "Veterinary and Sanitary Expertise"
1. Organoleptic assessment of the degree of freshness of meat.
2. Determination of the milk purity group, standards, and the significance of this indicator.
3. Determination of milk density, standards, and the significance of this indicator.
4. Veterinary and sanitary examination of mushrooms in markets.
5. Methods of meat testing for trichinosis.
6. Organoleptic assessment of the freshness of fish.
7. Veterinary and sanitary examination and assessment of eggs.
8. Evaluate the conformity of the labeling label with the requirements of Technical Regulations.
9. Organoleptic evaluation of honey.
10. Issue a veterinary accompanying document to Petrov P.V. of the Novgorod region, Starorussky district, village of Wort, for the unrestricted sale of 2 carcasses (4 half-carcasses) of beef meat with a total weight of 600 kg, obtained from healthy cows, at the Blacksmith market in St. Petersburg.


## Discipline "Obstetrics and Gynecology"
1. Tools and techniques for artificial insemination of cows.
2. Determination of estrus and heat in cows.
3. Select and present obstetric instruments for obstetrics and fetotomy.
4. Methods of studying semen from a bull of industrial importance.
5. The amount of sperm in a dose for insemination of cows, sheep, and pigs.
6. Perform a differential diagnosis of ovarian dysfunction (hypofunction, cyst, persistent corpus luteum).
7. Actions of a veterinarian in case of postpartum paresis in a cow.
8. The technique of applying obstetric loops to the head and limbs of the fetus during head presentation.
9. How to determine the onset of labor and when to intervene in the delivery process.
10. Actions of the obstetrician in cases of retained placenta in cows.


## Discipline "General and Private Surgery"
1. The purpose of the wooden orthopedic block (DEMOTEC) and the technique of its application.
2. Determine the purpose of the orthopedic horseshoe.
3. Technique and purpose of retrobulbar novocaine blockade according to V. N. Avrorov.

4. Technique and purpose of novocaine blockade of udder nerves according to B. A. Bashkirov.
5. Technique and purpose of the circular novocaine blockade according to I. I. Magda.
6. Purpose of a rubber boot for cattle.
7. The technique of working with a mirror ophthalmoscope.
8. X-ray reading and diagnosis.
9. Technique of working with a hoof knife.
10. Technique of infrared irradiation of animals with a Sollux lamp.

### Discipline "Pathological Anatomy and Forensic Veterinary Examination"
1. The procedure for the autopsy of animal corpses using the complete evisceration method according to G. V. Shor.
2. Pathoanatomical method for determining stillbirth.
3. Collection and transfer of pathological material for histological, bacteriological, virological, and chemical-toxicological studies.
4. Determination of the time of death based on postmortem changes.
5. The difference between tympani of the scar and postmortem swelling.
6. The difference between acute stomach enlargement and rupture and postmortem changes.
7. Pathoanatomical diagnosis of slow infections (scrapie, visna-maedi, sheep adenomatosis, bovine spongiform encephalopathy).
8. Pathoanatomical diagnosis of enzootic pneumonia, actinobacillus pleuropneumonia, and hemophilic polyserositis in pigs.
9. Pathoanatomical diagnosis of diseases in newborn piglets (colibacteriosis, anaerobic dysentery, transmissible gastroenteritis).
10. Pathoanatomical diagnosis of colibacteriosis, salmonellosis, and dysentery in pigs.
11. Pathoanatomical diagnosis of pasteurellosis in cattle.
12. The procedure for appointing and conducting a forensic veterinary examination.

### Discipline "Organization of Veterinary Business"
1. Draw up a certificate for the vaccination of horses against anthrax.
2. Draw up an act for the tuberculinization of cattle.
3. Draw up a certificate for the preventive disinfection of a 500 sq. m livestock facility using a 3% bleach solution.
4. Write a draft order from the head of JSC "Breeding Plant 'Ruchi'" on the approval of the action plan for the elimination and prevention of mass cases of bronchopneumonia in calves (aged 1 month).
5. Write a draft resolution of the governor of a subject of the Russian Federation on the imposition of quarantine for the elimination of rabies.
6. Draw up a medical bill.

**Compliance of the content of the state exam questions with the cumulative expected educational outcomes in a competency-based format.**

| № | Questions on disciplines | Competencies to be assessed during the defense of the final qualifying project. |
|---|---|---|
| 1 | Parasitology and invasive diseases | GPC-6; PC-5; PC-11; PC-13; PC-14 |
| 2 | Clinical diagnosis | GPC-1; PC-1; PC-2; PC-12 |
| 3 | Epizootology and infectious diseases | GPC-1; GPC-6; PC -11; PC-13; PC-14; PC-16 |
| 4 | Veterinary and sanitary expertise | GPC-6; GPC-7; PC-18 |
| 5 | Obstetrics and gynecology | GPC-1; PC-3; PC-5; PC-6; PC-10; PC-15; PC-17 |
| 6 | General and private surgery | GPC-1; PC-3; PC-5; PC-6; PC-10; PC-15; PC-17 |
| 7 | Internal non-communicable diseases | GPC-1; GPC-2; PC-3; PC-5; PC-6; PC-10; PC-15; PC-17 |
| 8 | Pathological anatomy and forensic veterinary examination | GPC-5; GPC-6; PC-4 |
| 9 | Organization of veterinary business | GPC-3; GPC-5; GPC-7; PC-11; PC-13; PC-14; PC-19 |

## 3. THE LIST OF EDUCATIONAL LITERATURE AND INTERNET RESOURCES NECESSARY FOR MASTERING THE INTERNSHIP PROGRAM
### 4. Basic literature

**1.** Akusherstvo, ginekologiya i biotekhnika reprodukcii zhivotnyh : uchebnik / A.P. Studencov, V.S. SHipilov, V.YA. Nikitin [i dr.]. — 9-e izd., pererab. i dop. — Sankt-Peterburg : Lan', 2019. — 548 s. — ISBN 978-5-8114-3271-4.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/l11907 (date of access: 24.06.2025).

**2.** Vasil'ev, V.K. Obshchaya hirurgiya: uchebnoe posobie / V.K. Vasil'ev, A.P. Popov, A.D. Cybikzhapov. — Sankt-Peterburg : Lan', 2014. — 272 s. —- ISBN 978-5-8114- 1686-8.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/51936 (date of access: 24.06.2025).

**3.** Vahrusheva, T.I. Obshchaya patologicheskaya anatomiya. Kurs lekcij : uchebnoeposobie / T.I. Vahrusheva. — Krasnoyarsk : KrasGAU, 2014. — 270 s.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/90783 (date of access: 24.06.2025).

**4.** Veterinarnaya farmaciya : uchebnik / N.L. Andreeva, G.A. Nozdrin, A.M. Lunegov [i dr.]. — Sankt-Peterburg : Lan', 2020. - 452 s. — ISBN 978-5-8114-4573-8. — Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [site]. – URL: https://e.lanbook.com/book/126918 (date of access: 24.06.2025).

**5.** Vnutrennie bolezni zhivotnyh : uchebnik / G.G. SHCHerbakov, A.V. YAshin, A.P. Kurdeko [i dr.] ; pod obshchej redakciej G.G. SHCHerbakova [i dr.]. — 2-e izd., ster. — Sankt-Peterburg : Lan', 2018. — 716 s. — ISBN 978-5-8114-1682-0.— Tekst: elektronnyj// Elektronno-bibliotechnayasistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/l06895 (date of access: 24.06.2025).

**6.** Gaponova, V.N. Bezopasnost' zhiznedeyatel'nosti / V.N. Gaponova, N.P. Ponomarenko, N.YU. YUgatova. — Sankt-Peterburg : SPbGAVM, [b. g.]. — CHast' 1 — 2017. — 59 s.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/121290 (date of access: 24.06.2025).

**7.** Dezinsekciya v sisteme protivoepizooticheskih meropriyatij / O.R. Polyakova, V.A. Kuz'min, YU.YU. Danko [i dr.]. — Sankt-Peterburg : SPbGAVM, 2016. — 14 s. — Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/121295 (date of access: 24.06.2025).

**8.** Dezinfekciya v sisteme protivoepizooticheskih meropriyatij / O.R. Polyakova, V.A. Kuz'min, YU.YU. Danko [i dr.]. — Sankt-Peterburg : SPbGAVM, 2016. — 72 s. —- Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [sajt]. — URL: https://e.lanbook.com/book/121296 (date of access: 24.06.2025).

**9.** Deloproizvodstvo v veterinarnyh uchrezhdeniyah i organizaciyah / A.A. Aliev, D.A. Pomerancev, I.I. SHershneva [i dr.]. -— Sankt-Peterburg : SPbGAVM, 2018. — 86 s. — Tekst : elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/121297 (date of access: 24.06.2025).

**10.** Deratizaciya v sisteme protivoepizooticheskih meropriyatij /O.R. Polyakova, V.A. Kuz'min, YU.YU. Danko [i dr.]. — Sankt-Peterburg : SPbGAVM, 2016. — 17 s. — Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/121298 (date of access: 24.06.2025).

**11.** Doronicheva, A.N. Bolezni zhivotnyh virusnoj etiologii : uchebnoe posobie / A.N. Doronicheva, G.M. Firsov. — Volgograd : Volgogradskij GAU, 2016. — 140 s.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/l00789 (date of access: 24.06.2025).

**12.** ZHarov, A.V. Patologicheskaya anatomiya zhivotnyh : uchebnik / A.V. ZHarov. — 2-e izd., pererab. i dop. — Sankt-Peterburg : Lan', 2013.;;— 608 s. — ISBN 978-5-8114- 1450-5.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/12985 (date of access: 24.06.2025).

13.	ZHarov, A.V. Sudebnaya veterinarnaya medicina : uchebnik / A.V. ZHarov. — 3-e izd., ispr. i dop. — Sankt-Peterburg : Lan', 2014. — 464 s. — ISBN 978-5-8114-1581— Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/45681 (date of access: 24.06.2025).

14.	Korolev, B.A. Praktikum po toksikologii :. uchebnik / B.A. Korolev, L.N. Skosyrskih, E.L. Liberman. — Sankt-Peterburg : Lan', 2016. — 384 s. —- ISBN 978-5- 8114-2246-3. — Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [site]. URL: https://e.lanbook.com/book/87580 (date of access: 24.06.2025).

15.	Korolev, B.A. Fitotoksikozy domashnih zhivotnyh : uchebnik / B.A. Korolev, K.A. Sidorova. — 2-e izd., pererab. i dop. — Sankt-Peterburg : Lan', 2014. — 352 s. — ISBN 978-5-8114-1589-2.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/41016 (date of access: 24.06.2025).

16.	Latypov, D.G. Vskrytie i patologoanatomicheskaya diagnostika boleznejzhivotnyh : uchebnoe posobie / D.G. Latypov, I.N. Zalyalov. — 2-e izd., pererab. — Sankt- Peterburg : Lan', 2015. — 384 s. — ISBN 978-5-8114-1976-0.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site].— URL: https://e.lanbook.com/book/65956 (date of access: 24.06.2025).

17.	Latypov, D.G. Gel'mintozy zhivotnyh, opasnye dlya cheloveka : uchebnoe posobie / D.G. Latypov. — 3-e izd., pererab. — Sankt-Peterburg : Lan', 2017. — 440 s. — ISBN 978-5-8114-2626-3.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/95143 (date of access: 24.06.2025).

18.	Latypov, D.G. Parazitologiya i invazionnye bolezni zhvachnyh zhivotnyh : uchebnoe posobie / D.G. Latypov, R.R. Timerbaeva, E.G. Kirillov. — Sankt-Peterburg : Lan', 2019. — 476 s. — ISBN 978-5-8114-3561-6.— Tekst : elektronnyj// Elektronno¬bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/121475 (date of access: 24.06.2025).

19.	Latypov, D.G. Protozojnye bolezni zhivotnyh, opasnye dlya cheloveka (protozojnye zoonozy) : uchebnoe posobie / D.G. Latypov, R.R. Timerbaeva, E.G. Kirillov. Sankt-Peterburg : Lan', 2017. — 208 s. — ISBN 978-5-8114-2631-7.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/96254 (date of access: 24.06.2025).

20.	Latypov, D.G. Spravochnik po patologoanatomicheskoj diagnostike zaraznyh boleznej svinej : uchebnoe posobie / D.G. Latypov. — Sankt-Peterburg : Lan', 2019. — 260 s. — ISBN 978-5-8114-3231-8.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/l11901 (date of access: 24.06.2025).

21.	Lechenie i profilaktika boleznej kopytec krupnogo rogatogo skota / V.V. Bajlov, A.A. Stekol'nikov, M.A. Narusbaeva [i dr.]. — Sankt-Peterburg : SPbGAVM,— 68 s. — Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'», 2017 :[site]. URL: https://e.lanbook.com/book/121309 (date of access: 24.06.2025).

22.	Lutfullin, M.H. Veterinarnaya gel'mintologiya : uchebnoe posobie / M.H. Lutfullin, D.G. Latypov, M.D. Kornishina. — 2-e izd., ster. — Sankt-Peterburg : Lan',—- 304 s. — ISBN 978-5-8114-1092-7.— Tekst: elektronnyj// Elektronno¬bibliotechnaya sistema «Lan'», 2018: [site]. — URL: https://e.lanbook.com/book/102228 (date of access: 24.06.2025).

23.	Nezaraznaya patologiya krupnogo rogatogo skota v hozyajstvah s promyshlennoj tekhnologiej: uchebnoe posobie / A.V. YAshin, G.G. SHCHerbakov, I.I. Kalyuzhnyj [i dr.] ; pod obshchej redakciej A.V. YAshina. — Sankt-Peterburg : Lan', 2019. 220 s. — ISBN 978-5-8114-4058-0. -— Tekst: elektronnyj // Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/125722 (date of access: 24.06.2025).

24.	Nikitin, I.N. Organizaciya gosudarstvennogo veterinarnogo nadzora : uchebnik / I.N. Nikitin, A.I. Nikitin. — 2-e izd., pererab. i dop. —- Sankt-Peterburg : Lan', 2019. — 460 s. — ISBN 978-5-8114-3437-4.—- Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/l13922 (date of access: 24.06.2025).

25.	Nikitin, I.N. Organizaciya i ekonomika veterinarnogo dela : uchebnik / I.N. Nikitin. — 6-e izd., pererab. i dop. — Sankt-Peterburg : Lan', 2014. — 368 s. — ISBN 978-5-8114-1609-7.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/44760 (date of access: 24.06.2025).

26. Osnovnye sindromy vnutrennih boleznej zhivotnyh / S.P. Kovalyov, A.P. Kurdeko, YU.K. Kovalenok [i dr.]. — Sankt-Peterburg : SPbGAVM, 2013. — 48 s.— Tekst: elektronnyj // Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/121315 (date of access: 24.06.2025).

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28. Polyancev, N.I. Praktikum po akusherstvu, ginekologii i biotekhnike razmnozheniya zhivotnyh : uchebnoe posobie / N.I. Polyancev. — Sankt-Peterburg : Lan', 2016. — 272 s. — ISBN 978-5-8114-1789-6.— Tekst: elektronnyj// Elektronno¬bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/71726 (date of access: 24.06.2025).

29. Praktikum po vnutrennim boleznyam zhivotnyh : uchebnik / G.G. SHCHerbakov, A.V. Korobov, B.M. Anohin [i dr.] ; pod redakciej G.G. SHCHerbakova. — 2-e izd. — Sankt-Peterburg : Lan', 2004. — 544 s. — ISBN 5-8114-0495-6.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/202 (date of access: 24.06.2025).

30. Praktikum po vnutrennim boleznyam zhivotnyh: uchebnik / G.G. SHCHerbakov, A.V. YAshin, A.P. Kurdeko [i dr.] ; pod obshchej redakciej G.G. SHCHerbakova [i dr.]. — 2-e izd., ster. — Sankt-Peterburg : Lan', 2018. — 544 s. — ISBN 978-5-8114-1999-9.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/l09630 (date of access: 24.06.2025).

31. Praktikum po chastnoj hirurgii : uchebnoe posobie / A.A. Stekol'nikov, B.S. Semenov, O.K. Suhovol'skij, E.I. Veremej ; pod redakciej A.A. Stekol'nikova. —- Sankt-Peterburg : Lan', 2013. — 352 s. — ISBN 978-5-8114-1503-8.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/38844 (date of access: 24.06.2025).

32. Salimov, V.A. Praktikum po patologicheskoj anatomii zhivotnyh : uchebnoe posobie / V.A. Salimov. — 3-e izd., ispr. i dop. — Sankt-Peterburg: Lan', 2018. — 256 s. — ISBN 978-5-8114-1418-5.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/107269 (date of access: 24.06.2025).

33. SHakurov, M.SH. Osnovy obshchej veterinarnoj hirurgii : uchebnoe posobie / M.SH. SHakurov. — 2-e izd., ster. — Sankt-Peterburg : Lan', 2016. — 252 s. — ISBN 978- 5-8114-1204-4.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/76290 (date of access: 24.06.2025).

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## 4.2. Additional literature

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**16.** Spravochnik veterinarnogo terapevta : uchebnoe posobie / G.G. SHCHerbakov, N.V. Danilevskaya, S.V. Starchenkov [i dr.] ; pod redakciej G.G. SHCHerbakova. — 5-e izd., ispr. i dop. — Sankt-Peterburg : Lan', 2009. — 656 s. — ISBN 978-5-8114-0241-0.— Tekst: elektronnyj// Elektronno-bibliotechnaya sistema «Lan'»: [site]. — URL: https://e.lanbook.com/book/445 (date of access: 24.06.2025).

**17.** Epizootologiya, diagnostika, profilaktika mikoplazmozov koz / YU.YU. Danko, A.V. Kudryavceva, V.A. Kuz'min [i dr.]. — Sankt-Peterburg : SPbGAVM, 2015. — 30 s. — Tekst : elektronnyj // Elektronno-bibliotechnaya sistema «Lan'» : [site]. — URL: https://e.lanbook.com/book/121328 (date of access: 24.06.2025).

### 4.3. Internet resources

Students can use the following Internet resources to prepare:

1. https://meduniver.com - Medical information website.
2. http://studvet.ru/ Veterinary portal.
3. Ветеринария.рф
4. The main veterinary portal of Russia
5. Encyclopedia of medicines and pharmacy products
6. The Vidal Veterinarian Handbook

### 4.4. Electronic library systems

1. ELS «СПБГУВМ»
2. ELS «Издательство «Лань»
3. ELS Znanium
4. ELS «Urait»
5. ELS publishing house " Quadro" "Elibrica"
6. Electronic books published by Prospekt Nauki Publishing House
7. ELS ELIBRARY.RU
8. Electronic Library of the All-Russian Portal "Young Specialist"
9. Electronic resources of agricultural universities

# 4. ASSESSMENT CRITERIA BASED ON THE RESULTS OF PASSING THE STATE EXAM

**EXCELLENT** – Deep, well-reasoned justification of the topic; clear formulation and understanding of the problem under study; extensive and correct use of relevant literature and applied analytical methods; demonstrated ability to identify the shortcomings of the theories used and make generalizations based on individual details. The content of the study and the course of the defense indicate the student's work skills in this field. The design of the work is excellent, with an expanded bibliography. The supervisor's review and the external review are positive.

**GOOD** – Reasoned justification of the topic; clear formulation and understanding of the problem under study; use of a limited number of literary sources, but sufficient for conducting research. The work is based on an average in-depth analysis of the problem under study, and a small number of generalizations have been made. The content of the study and the course of the defense indicate the student's practical skills in this field. The work is well designed, with the necessary bibliography. The supervisor's review and the external review are positive.

**SATISFACTORY** – Sufficient justification of the chosen topic, but lacking a deep understanding of the problem under consideration. The bibliography contains mostly references to standard literary sources. The scientific works necessary for a comprehensive study of the problem have been used to a limited extent. There is a noticeable lack of student competence in this area of knowledge. The work is designed with elements of negligence. The supervisor's review and the external review are positive but contain comments.

**UNSATISFACTORY** – The topic is presented in a general way. A limited number of literary sources are used. Template presentation of the material. The presence of a dogmatic approach to the theories and concepts used. Inaccuracies and incorrect conclusions in the literature under study. The work is designed with noticeable deviations from accepted requirements. The supervisor's review and the external review contain significant comments but allow for the possibility of public defense of the thesis.

Developer:
Dean of the Faculty of Veterinary Medicine,
Doctor of Veterinary Sciences, Associate Professor

A. N. Tokarev