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# WORKING COURSE SYLLABUS

# Anesthesiology, resuscitation and intensive care

**Recommended by the Methodological Council for the Education Field:** 

36.05.01 Veterinary medicine

## **1. GOALS AND OBJECTIVES OF THE DISCIPLINE**

The aim of mastering the discipline "Anesthesiology, resuscitation and intensive care" is to master students' theoretical knowledge, practical skills and skills to ensure the safety of a sick animal at all stages of surgical treatment by preventing or reducing the body's response to injury, as well as restoring its impaired functions.

## 2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "Anesthesiology, resuscitation and intensive care" is aimed at creating the following competencies (parts of competencies) for students:

Table 2.1. List of competencies formed by students during the development of the discipline (results of the development of the discipline)

| Code   | Competence  | Indicators of competence   |
|--------|---|--|
|        |   | <b>accomplishment</b> (within the discipline)  |
| GPC -1 | The ability to determine the<br>biological status and normative<br>clinical indicators of organs and<br>systems of the animal body.   | GPC-1.1 Knows the structure and<br>functions of the main systems of the<br>animal body, taking into account the<br>specific features<br>GPC-1.2 He s able to predict the expected<br>violations of the biological status in case<br>of suspected development of diseases<br>GPC-1.3 He is able to determine the main<br>indicators of the activity of individual<br>body systems and draw conclusions about<br>the presence of deviations from the<br>standard values<br>GPC-1.4 Has the skills of sampling<br>biological fluids and tissues for research,<br>performing laboratory tests, interpreting<br>research results. |
| GPC-2  | The ability to interpret and<br>evaluate in professional activity<br>the influence of natural, socio-<br>economic, genetic and<br>economic factors on the<br>physiological state of the<br>animal organism. | <ul> <li>GPC-2.1 Has knowledge of the influence of natural, socio-economic, genetic and economic factors on the animal body.</li> <li>GPC-2.2 He is able to establish the presence and reliability of cause-and-effect relationships between the effects of certain etiological factors on the animal's body and the development of diseases.</li> <li>GPC-2.3 Possesses methods of preventive and curative correction of the effects of adverse environmental factors that can</li> </ul>   |

|        |   | cause deterioration of animal health.  |
|--------|---|--|
| GPC -4 | The ability to use methods of<br>solving problems using modern<br>equipment in the development<br>of new technologies in<br>professional activity and to use<br>modern professional<br>methodology for conducting<br>experimental research and<br>interpreting their results. | <ul> <li>GPC-4.1 Possesses the conceptual and methodological apparatus of basic natural sciences at a level sufficient for full-fledged professional activity at the modern level.</li> <li>GPC-4.2 He knows the methods of solving problems using modern equipment.</li> <li>GPC-4.3 He is ready to use modern methodology in the development and conduct of experimental research.</li> <li>GPC-4.4 Uses modern professional methodology in interpreting research</li> </ul> |
| GPC -5 | The ability to draw up special<br>documentation, analyze the<br>results of professional activity<br>and submit accounting<br>documents using specialized<br>databases.  | results.<br>GPC-5.1 Has the skills to search for the<br>necessary forms of documentation on<br>official websites and in specialized<br>databases.<br>GPC-5.2 Possesses professional<br>terminology and skills in filling out<br>analytical and reporting documents of a<br>professional orientation.   |
| CDC (  | The shility to englyze identify   | GPC-5.3 He is able to use specialized<br>software to analyze the results of<br>professional activity and compile<br>accounting documentation.  |
| GPC -6 | The ability to analyze, identify<br>and assess the risk of the risk of<br>the occurrence and spread of<br>diseases.   | <ul><li>GPC-6.1 Has knowledge in the field of etiology and pathogenesis of animal diseases of different species.</li><li>GPC-6.2 Has the skills to diagnose non-infectious, infectious and invasive diseases, identify pathogens of infectious and invasive diseases in animals.</li></ul>   |
|        |   | GPC-6.3 He knows the patterns of the occurrence and spread of diseases in animal populations, factors predisposing to diseases and the causes of possible complications.   |
| GPC -7 | He is able to understand the<br>principles of modern<br>information technologies and<br>use them to solve the tasks of<br>professional activity.  | GPC-7.1 Understands the principles of<br>modern computer technology and<br>telecommunications and is able to use<br>them to solve professional problems;<br>GPC-7.2 Uses modern special software<br>and specialized databases to solve   |
|        | use them to solve the tasks of  | them to solve professional problem   |

|       |   | duties;  |
|-------|---|--|
|       |   | GPC-7.3 Has the skills to work on modern<br>medical diagnostic and therapeutic<br>equipment with software;<br>GPC-7.4 Uses specialized databases to<br>solve professional problems in the field of<br>diagnostics and treatment of animals of  |
|       |   | various species;<br>GPC-7.5 Uses geoinformation systems<br>and software complexes when collecting<br>and analyzing information related to the<br>assessment of the spread of infectious<br>diseases, epizootic situations, planning<br>and evaluating the effectiveness of anti-<br>epizootic measures.  |
| PC -1 | The ability to collect anamnesis<br>of life and disease of animals to<br>identify the causes of diseases<br>and their nature.   | PC -1.1 He is able to collect an anamnesis<br>of the animal's life and reflect this in the<br>relevant service documentation.  |
|       |   | <ul> <li>PC-1.2 He is able to collect the anamnesis of the animal's disease and reflect it in the patient's medical history.</li> <li>PC-1.3 He is able to identify possible causes of the disease in an animal, factors predisposing to the disease and concomitant conditions affecting the nature of the course of the disease and use this information when making a diagnosis.</li> </ul> |
| PC -2 | The ability to conduct a general<br>clinical study of animals in<br>order to establish a preliminary<br>diagnosis and determine the<br>further research program, as<br>well as in accordance with the | PC-2.1 He is able to conduct a general clinical study of animals of different species in order to establish a preliminary diagnosis and determine the further research program   |
|       | plan of antiepizootic measures,<br>the plan of prevention of non-<br>infectious animal diseases.  | PC-2.2 He is able to conduct mass clinical<br>studies of animals in accordance with the<br>plan of antiepizootic measures, the plan of<br>prevention of non-infectious animal<br>diseases  |
| PC -3 | Ability to develop animal<br>research programs using special<br>(instrumental) and laboratory<br>methods.   | PC-3.1 He is able to develop individual<br>animal research programs, including the<br>use of special (instrumental) and<br>laboratory methods to detect deviations<br>from the physiological norm of the state<br>of a living organism, conduct differential<br>diagnosis of the detected pathology or<br>control the course of the disease and the  |

|  |   | effectiveness of the prescribed treatment.   |
|--|---|--|
|  |   | PC-3.2 Capable of developing mass<br>comprehensive animal research programs<br>(medical examination programs) of<br>animals, taking into account their type and<br>purpose, both general and special.            |
| PC -4 The ability to conduct clinical studies of animals using special (instrumental) and laborator methods to clarify the studies of animals using special (instrumental) and laborator methods to clarify the special studies of animals using special studies of anim |   | PC-4.1 Able to conduct additional animal studies using laboratory methods to clarify the diagnosis.  |
|  | diagnosis.  | PC-4.2 Able to conduct additional animal studies using special (instrumental) methods to clarify the diagnosis.  |
| PC -5  | The ability to make a diagnosis<br>based on the analysis of<br>anamnesis data, general, special<br>(instrumental) and laboratory<br>research methods. | PC-5.1 He is able to diagnose patients of various types based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods.  |
|  |   | PC -5.2 He is able to predict the risks of diseases based on anamnestic data, the results of general, special (instrumental) and laboratory studies.   |
| PC -6  | The ability to develop a<br>treatment plan for animals<br>based on the established<br>diagnosis and individual<br>characteristics of animals.         | PC-6.1 Able to develop a treatment plan<br>for animals based on the established<br>diagnosis and individual characteristics of<br>animals.   |
|  |   | PC-6.2 He is able to develop<br>recommendations on therapeutic and<br>preventive manipulations to prevent<br>diseases, the high probability of which<br>was revealed during the study of the<br>patient.         |
|  |   | PC-6.3 He is able to develop<br>recommendations for carrying out<br>preventive and curative measures based<br>on the results of the examination of<br>animals carried out as part of the medical<br>examination. |

| PC -7 | The ability to choose the necessary drugs of chemical and biological nature for the treatment of animals, taking into account their combined pharmacological effect on the body. | PC -7.1 He is able to choose medicines of<br>chemical and biological nature necessary<br>for the treatment of animals, guided by the<br>principles of evidence-based medicine,<br>taking into account their combined<br>pharmacological effect on the body.  |
|-------|--|--|
|       |  | PC-7.2 He is able to justify the prescription of a drug in a certain clinical case or the impossibility of using this drug in the situation under consideration.   |
|       |  | PC-7.3 He is able to calculate the dose,<br>frequency and duration of the course of<br>application of the drug to the patient,<br>taking into account the form of release<br>and the characteristics of the<br>administration of the drug to the patient.<br>PC-7.4 He is able to take into account<br>drug interactions when prescribing a<br>course of treatment to an animal already<br>receiving medications and biologically<br>active additives due to the presence of<br>diseases identified earlier. |
|       |  | PC-7.5 He is able to take into account<br>economic, species and age characteristics,<br>as well as the results of laboratory studies<br>of the patient when choosing drugs for the<br>treatment of the patient.  |
| PC -8 | Ability to choose methods of<br>non-drug therapy, including<br>physiotherapy methods for the<br>treatment of animals.  | PC-8.1 He is able to choose and justify his<br>choice of methods of non-drug therapy,<br>including physiotherapy methods, for the<br>treatment of animals;   |
|       |  | PC-8.2 He is able to evaluate the effectiveness of the chosen method in the treatment of the patient and, if necessary, adjust the treatment method or change the chosen method to another one.  |
| PC -9 | The ability to carry out<br>therapeutic, including<br>physiotherapy procedures using<br>special equipment in<br>compliance with safety rules.                                    | <ul> <li>PC-9.1 Able to carry out therapeutic, including physiotherapy, procedures using special equipment in compliance with safety rules;</li> <li>PC -9.2 He is able to take into account the species, age and individual characteristics of animals undergoing treatment using</li> </ul>  |

|        | [  | · · · · · · · · · · · · · · · · · · ·  |
|--------|--|--|
|        |  | special equipment, choose acceptable<br>methods of fixing the patient during the<br>procedure, the conditions of the<br>procedures and their duration.   |
| PC -11 | Ability to develop a surgical operation plan, including the  | PC-11.1 Able to develop a surgical operation plan;   |
|        | choice of analgesia method   | PC-11.2 He is able to choose and justify<br>the optimal variant of anesthesia of the<br>patient during surgery and in the<br>postoperative period.   |
| PC -13 | Ability to develop<br>recommendations for special<br>feeding of sick animals for<br>therapeutic purposes.  | <ul> <li>PC-13.1 He is able to justify the appointment of special feeding to an animal for therapeutic purposes in various diseases;</li> <li>PC-13.2 He is able to recommend the approximate composition of therapeutic diets, the desired ratio of nutrients, the presence of special additives and components that enhance the therapeutic effect of the diet;</li> <li>PC-13.3 He is able to use special programs and databases for the selection of industrial therapeutic diets and dietary supplements, as well as for the</li> </ul> |
|        |  | compilation of individual therapeutic diets for animals of various species.  |
| PC -14 | The ability to conduct repeated<br>examinations and studies of<br>animals to assess the<br>effectiveness and safety of the   | PC-14.1 He is able to develop a plan of<br>repeated studies necessary and sufficient<br>to assess the predicted changes in the<br>patient's health.  |
|        | prescribed treatment and adjust<br>the treatment plan of animals (if<br>necessary) based on the results<br>of the evaluation of the<br>effectiveness of treatment. | <ul><li>PC-14.2 Able to conduct a repeated clinical examination, taking into account the specifics of diseases previously diagnosed in the patient.</li><li>PC-14.3 Able to carry out the necessary repeated instrumental and laboratory tests.</li></ul>  |
|        |  | PC-14.4 He is able to analyze the identified changes, evaluate the effectiveness of the treatment and, if necessary, correct the prescribed course of treatment.   |

# **3. COURSE IN HIGHER EDUCATION**

The discipline "**Anesthesiology, resuscitation and intensive care**" belongs to the part formed by the participants of educational relations of the block B1 of the Educational Program of Higher Education.

As part of the Educational Program of Higher Education, students also master other disciplines and /or practices that contribute to achieving the planned results of mastering the discipline "Anesthesiology, resuscitation and intensive care".

Table 3.1. List of Higher Education Program components disciplines that contribute to expected learning outcomes

| Competence<br>code | Competence  | Previous Disciplines<br>(Modules)   | Subsequent<br>Disciplines<br>(Modules)  |
|--------------------|---|---|---|
| GPC -1             | The ability to determine<br>the biological status and<br>normative clinical<br>indicators of organs and<br>systems of the animal<br>body.   | Animal anatomy<br>Cytology, histology and<br>embryology<br>Physiology and<br>ethology of animals<br>Pathological physiology<br>Clinical diagnosis<br>Pathological anatomy<br>Instrumental diagnostic<br>methods<br>Obstetrics, gynecology<br>and andrology<br>Immunology<br>Clinical laboratory<br>diagnostics<br>Laboratory diagnostics<br>of infectious and<br>invasive diseases<br>Veterinary and<br>industrial laboratories<br>with the basics of design<br>Bee diseases and<br>entomophages<br>Fish pathology and<br>aquaculture |   |
| GPC-2              | The ability to interpret<br>and evaluate in<br>professional activity the<br>influence of natural,<br>socio-economic, genetic<br>and economic factors on<br>the physiological state of<br>the animal organism. | Biology with the basics<br>of ecology<br>Veterinary genetics<br>Veterinary<br>microbiology and<br>mycology  | Dermatology<br>Cardiology<br>Endocrinology<br>Nephrology<br>Veterinary<br>Ophthalmology<br>Animal Dentistry |

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|--------|-----------------------|--------------------------|--------------------|
|        |                       | husbandry                |                    |
|        |                       | Animal health and        |                    |
|        |                       | welfare                  |                    |
|        |                       | Pathological physiology  |                    |
|        |                       | Veterinary               |                    |
|        |                       | Radiobiology             |                    |
|        |                       | Pathological anatomy     |                    |
|        |                       | Instrumental diagnostic  |                    |
|        |                       | methods                  |                    |
|        |                       |                          |                    |
|        |                       | Toxicology               |                    |
|        |                       | Obstetrics, gynecology   |                    |
|        |                       | and andrology            |                    |
|        |                       | Internal non-infectious  |                    |
|        |                       | diseases                 |                    |
|        |                       | General surgery          |                    |
|        |                       | Private Veterinary       |                    |
|        |                       | surgery                  |                    |
|        |                       | Parasitology and         |                    |
|        |                       | invasive diseases        |                    |
|        |                       | Epizootology and         |                    |
|        |                       | infectious diseases      |                    |
|        |                       |                          |                    |
|        |                       | Forensic veterinary      |                    |
|        |                       | examination and          |                    |
|        |                       | autopsy of animals       |                    |
|        |                       | Immunology               |                    |
|        |                       | General and veterinary   |                    |
|        |                       | ecology                  |                    |
|        |                       | Veterinary sanitation    |                    |
|        |                       | Forage plants            |                    |
|        |                       | Zoopsychology            |                    |
|        |                       | Animal Health            |                    |
|        |                       | Diseases of horses       |                    |
|        |                       | Diseases of productive   |                    |
|        |                       | animals                  |                    |
|        |                       | •••••••••                |                    |
|        |                       | Diseases of small pets   |                    |
|        |                       | Diseases of small pets   |                    |
|        |                       | Bee diseases and         |                    |
|        |                       | entomophages             |                    |
|        |                       | Fish pathology and       |                    |
|        |                       | aquaculture              |                    |
|        |                       | Diseases of exotic       |                    |
|        |                       | animals                  |                    |
| GPC -4 | The ability to use    | Inorganic and analytical | Dermatology        |
|        | methods of solving    | chemistry                | Cardiology         |
|        | problems using modern | Organic Chemistry        | Endocrinology      |
|        | equipment in the      | Biological physics       | Nephrology         |
|        | development of new    | Computer science         | Reconstructive and |
|        |                       | Physical and colloidal   | reconstructive     |
|        | technologies in       | Filysical and conoldal   | reconstructive     |

|                      | <u> </u> | 1 .                      |                  |
|----------------------|----------|--------------------------|------------------|
| professional activit | •        |                          | surgery          |
|                      | nodern   | Cytology, histology and  | -                |
| professional         |          | embryology               | Ophthalmology    |
| methodology          | for      | Biological chemistry     | Animal Dentistry |
| conducting experim   |          | Veterinary               |                  |
| research and interp  | oreting  | microbiology and         |                  |
| their results.       |          | mycology                 |                  |
|                      |          | Virology and             |                  |
|                      |          | biotechnology            |                  |
|                      |          | Physiology and           |                  |
|                      |          | ethology of animals      |                  |
|                      |          | Breeding with the basics |                  |
|                      |          | of private animal        |                  |
|                      |          | husbandry                |                  |
|                      |          | Pathological physiology  |                  |
|                      |          | Veterinary               |                  |
|                      |          | •                        |                  |
|                      |          | Radiobiology             |                  |
|                      |          | Clinical diagnosis       |                  |
|                      |          | Pathological anatomy     |                  |
|                      |          | Operative surgery with   |                  |
|                      |          | topographic anatomy      |                  |
|                      |          | Instrumental diagnostic  |                  |
|                      |          | methods                  |                  |
|                      |          | Toxicology               |                  |
|                      |          | Obstetrics, gynecology   |                  |
|                      |          | and andrology            |                  |
|                      |          | Internal non-infectious  |                  |
|                      |          | diseases                 |                  |
|                      |          | General surgery          |                  |
|                      |          | Private Veterinary       |                  |
|                      |          | surgery                  |                  |
|                      |          | Parasitology and         |                  |
|                      |          | invasive diseases        |                  |
|                      |          | Epizootology and         |                  |
|                      |          | infectious diseases      |                  |
|                      |          | Mathematics              |                  |
|                      |          | Immunology               |                  |
|                      |          | Veterinary sanitation    |                  |
|                      |          | Technology of            |                  |
|                      |          | processing livestock     |                  |
|                      |          |                          |                  |
|                      |          | products<br>Madiainal    |                  |
|                      |          | Medicinal and            |                  |
|                      |          | poisonous plants         |                  |
|                      |          | Forage plants            |                  |
|                      |          | Fundamentals of          |                  |
|                      |          | intellectual work        |                  |
|                      |          | Personality psychology   |                  |
|                      |          | and professional self-   |                  |

|        |                           | determination                          |               |
|--------|---------------------------|--|---------------|
|        |                           |  |               |
|        |                           | Clinical laboratory                    |               |
|        |                           | diagnostics                            |               |
|        |                           | Laboratory diagnostics                 |               |
|        |                           | of infectious and                      |               |
|        |                           | invasive diseases                      |               |
|        |                           | Diseases of horses                     |               |
|        |                           | Diseases of productive                 |               |
|        |                           | animals                                |               |
|        |                           | Diseases of small pets                 |               |
|        |                           | Diseases of small pets                 |               |
|        |                           | Bee diseases and                       |               |
|        |                           | entomophages                           |               |
|        |                           | Fish pathology and                     |               |
|        |                           | aquaculture                            |               |
|        |                           | Diseases of exotic                     |               |
|        |                           | animals                                |               |
| GPC -5 | The ability to draw up    |  | Dermatology   |
|        | special documentation,    | Computer science                       | Cardiology    |
|        | analyze the results of    | 1                                      | Endocrinology |
|        | professional activity and | of private animal                      | Nephrology    |
|        | submit accounting         | husbandry                              | 1.01.10.87    |
|        | documents using           | Clinical diagnosis                     |               |
|        | specialized databases.    | Pathological anatomy                   |               |
|        | specialized databases.    | Operative surgery with                 |               |
|        |                           | topographic anatomy                    |               |
|        |                           | Instrumental diagnostic                |               |
|        |                           | methods                                |               |
|        |                           | Obstetrics, gynecology                 |               |
|        |                           | and andrology                          |               |
|        |                           | Internal non-infectious                |               |
|        |                           | diseases                               |               |
|        |                           | Parasitology and                       |               |
|        |                           | invasive diseases                      |               |
|        |                           | Epizootology and                       |               |
|        |                           | infectious diseases                    |               |
|        |                           |  |               |
|        |                           | Veterinary and sanitary examination    |               |
|        |                           |  |               |
|        |                           | Organization of                        |               |
|        |                           | veterinary business                    |               |
|        |                           | Forensic veterinary<br>examination and |               |
|        |                           |  |               |
|        |                           | autopsy of animals                     |               |
|        |                           | Veterinary deontology                  |               |
|        |                           | Economics and                          |               |
|        |                           | organization of                        |               |
|        |                           | agricultural production                |               |
|        |                           | Clinical laboratory                    |               |

| diagnosticsLaboratory diagnosticsof infectious andinvasive diseasesOrganization of stateveterinary supervisionVeterinary andindustrial laboratorieswith the basics of designGPC -6The ability to analyze,identify and assess therisk of the risk of theoccurrence and spread ofdiseases.microbiology andmicrobiology andbiotechnologyVirology andbiotechnologyAnimal health andwelfareFeeding animals withthe basics of feedproductionVeterinary   | у |
|--|---|
| GPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Organization of state<br>veterinary supervision<br>Veterinary and<br>industrial laboratories<br>with the basics of designGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Life safety<br>Veterinary<br>microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionVeterinary   | у |
| GPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecologyVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecologyVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>of ecologyBiology with the basics<br>of ecologyVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecologyVeterinary<br>Ophthalmology<br>Animal DentistrMicrobiology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionHeath and<br>welfare   | У |
| GPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecologyVeterinary<br>of<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecologyVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>of ecologyBiology with the basicsVeterinaryGPC -6The ability to analyze,<br>identify and assess the<br>of ecologyOphthalmology<br>Ophthalmology<br>Animal DentistrVeterinaryGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>Veterinary<br>diseases.Veterinary<br>Microbiology and<br>Microbiology and<br>Microbiology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionImage: Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>Descent<br>De  | у |
| GPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Life safety<br>Veterinary<br>Miral DentistrVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Vieterinary<br>Veterinary<br>Veterinary<br>Miral DentistrVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>Ophthalmology and<br>microbiology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionVeterinary<br>occurence  | у |
| GPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Life safetyVeterinary<br>Ophthalmology<br>Animal DentistrGPC -6The ability to analyze,<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Vieterinary<br>Veterinary<br>Vieterinary<br>Mired biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionVeterinary<br>Ophthalmology<br>Animal Dentistr   | у |
| GPC -6The ability to analyze,<br>identify and assess the<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Life safety<br>Veterinary<br>Microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionVeterinary and<br>industrial laboratories<br>Weterinary<br>Ophthalmology<br>Ophthalmology<br>Animal Dentistr  | y |
| GPC -6The ability to analyze,<br>identify and assess the<br>identify and assess the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Life safetyVeterinary<br>Ophthalmology<br>Animal Dentistrdiseases.microbiology and<br>mycology<br>Virology and<br>biotechnologyImage: Solution of the trans of the | у |
| GPC -6The ability to analyze,<br>identify and assess the<br>of ecology with the basicsVeterinary<br>Ophthalmology<br>Animal Dentistrrisk of the risk of the<br>occurrence and spread of<br>diseases.Life safetyAnimal Dentistrmicrobiology and<br>mycology<br>Virology and<br>biotechnologyMinual DentistrVirology and<br>biotechnologyHerringFeeding animals with<br>the basics of feed<br>productionHerring  | y |
| GPC -6The ability to analyze,<br>identify and assess the<br>risk of the risk of the<br>occurrence and spread of<br>diseases.Biology with the basics<br>of ecology<br>Life safety<br>Veterinary<br>microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>productionVeterinary<br>Ophthalmology<br>Animal Dentistr  | у |
| identify and assess the<br>risk of the risk of the<br>occurrence and spread of<br>diseases.  | у |
| risk of the risk of the<br>occurrence and spread of<br>diseases.   | у |
| occurrence and spread of<br>diseases.Veterinary<br>microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production   | У |
| diseases.<br>diseases.<br>microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production  |   |
| mycology<br>Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production  |   |
| Virology and<br>biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production  |   |
| biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production  |   |
| biotechnology<br>Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production  |   |
| Animal health and<br>welfare<br>Feeding animals with<br>the basics of feed<br>production   |   |
| Feeding animals with<br>the basics of feed<br>production   |   |
| Feeding animals with<br>the basics of feed<br>production   |   |
| the basics of feed<br>production   |   |
| production   |   |
|  |   |
|  |   |
|  |   |
| Radiobiology   |   |
| Clinical diagnosis   |   |
| Pathological anatomy   |   |
| Instrumental diagnostic  |   |
| methods  |   |
| Toxicology   |   |
| Obstetrics, gynecology   |   |
| and andrology  |   |
| Internal non-infectious  |   |
| diseases   |   |
| General surgery  |   |
| Private Veterinary   |   |
| surgery  |   |
| Parasitology and   |   |
| invasive diseases  |   |
| Epizootology and   |   |
| infectious diseases  |   |
|  |   |
| Veterinary and sanitary  |   |
| examination  |   |
| Organization of  |   |
| veterinary business  |   |
| Forensic veterinary  |   |
| examination and  |   |
| autopsy of animals   |   |
| Introduction to the  |   |

|        | [                         | • •                       |                    |
|--------|---------------------------|---------------------------|--------------------|
|        |                           | specialty                 |                    |
|        |                           | General and veterinary    |                    |
|        |                           | ecology                   |                    |
|        |                           | Veterinary sanitation     |                    |
|        |                           | Technology of             |                    |
|        |                           | processing livestock      |                    |
|        |                           | products                  |                    |
|        |                           | Medicinal and             |                    |
|        |                           | poisonous plants          |                    |
|        |                           | Forage plants             |                    |
|        |                           | Animal Health             |                    |
|        |                           | Clinical laboratory       |                    |
|        |                           | diagnostics               |                    |
|        |                           | Laboratory diagnostics    |                    |
|        |                           | of infectious and         |                    |
|        |                           |                           |                    |
|        |                           | invasive diseases         |                    |
|        |                           | Organization of state     |                    |
|        |                           | veterinary supervision    |                    |
|        |                           | Diseases of horses        |                    |
|        |                           | Diseases of productive    |                    |
|        |                           | animals                   |                    |
|        |                           | Diseases of small pets    |                    |
|        |                           | Diseases of small pets    |                    |
|        |                           | Bee diseases and          |                    |
|        |                           | entomophages              |                    |
|        |                           | Fish pathology and        |                    |
|        |                           | aquaculture               |                    |
|        |                           | Diseases of exotic        |                    |
|        |                           | animals                   |                    |
|        |                           | Anesthesiology,           |                    |
|        |                           | intensive care and        |                    |
|        |                           | intensive care            |                    |
| GPC -7 | He is able to verdenstand |                           | Dormatalagr        |
| GPC -/ | He is able to understand  | Computer science          | Dermatology        |
|        | the principles of modern  | Instrumental diagnostic   | Cardiology         |
|        | information technologies  | methods                   | Endocrinology      |
|        | and use them to solve the | Organization of           | Nephrology         |
|        | tasks of professional     | veterinary business       | Reconstructive and |
|        | activity.                 | Mathematics               | reconstructive     |
|        |                           | Fundamentals of           | surgery            |
|        |                           | intellectual work         |                    |
|        |                           | Clinical laboratory       |                    |
|        |                           | diagnostics               |                    |
|        |                           | Laboratory diagnostics    |                    |
|        |                           | of infectious and         |                    |
|        |                           | invasive diseases         |                    |
|        |                           | Veterinary and            |                    |
|        |                           | industrial laboratories   |                    |
|        |                           | with the basics of design |                    |
|        |                           | with the basies of design |                    |

| PC -1The ability to collect<br>anamnesis of life and<br>disease of animals to<br>identify the causes of<br>diseases and their nature.Veterinary genetics<br>Physiology and<br>ethology of animals<br>Breeding with the basics<br>of private animal<br>husbandryDermatology<br>Cardiology<br>Reconstruction   | gy<br>ive and |
|--|---------------|
| disease of animals to<br>identify the causes of<br>diseases and their nature. diseases and their nature. dis | ive and       |
| identify the causes of Breeding with the basics Nephrology diseases and their nature. of private animal husbandry reconstructive   | ive and       |
| diseases and their nature. of private animal Reconstruction husbandry reconstruction   |               |
| husbandry reconstructiv  |               |
| •  | ve            |
|  |               |
| Animal health and surgery  |               |
| welfare Veterinary   |               |
| Feeding animals with Ophthalmole   | ogy           |
| the basics of feed Animal Den  | tistry        |
| production   |               |
| Clinical diagnosis   |               |
| Toxicology   |               |
| Obstetrics, gynecology   |               |
| and andrology  |               |
| Internal non-infectious  |               |
| diseases   |               |
| General surgery  |               |
| Private Veterinary   |               |
| surgery  |               |
| Parasitology and   |               |
| invasive diseases  |               |
| Epizootology and   |               |
| infectious diseases  |               |
| Fundamentals of  |               |
| rhetoric and   |               |
| communication  |               |
| Veterinary deontology  |               |
| Zoopsychology  |               |
| Animal Health  |               |
| Personality psychology   |               |
| and professional self-   |               |
| determination  |               |
| Diseases of horses   |               |
| Diseases of productive   |               |
| animals  |               |
| Diseases of small pets   |               |
| Diseases of small pets   |               |
| Diseases of exotic   |               |
| animals  |               |
| PC -2 The ability to conduct a Animal anatomy -  |               |
| general clinical study of Physiology and   |               |
| animals in order to ethology of animals  |               |
| establish a preliminary Pathological physiology  |               |
| diagnosis and determine Clinical diagnosis   |               |
| the further research Pathological anatomy  |               |
| program, as well as in Obstetrics, gynecology  |               |
| accordance with the plan and andrology   |               |

|       | of antiepizootic<br>measures, the plan of<br>prevention of non-<br>infectious animal<br>diseases.         |   |  |
|-------|---|---|--|
| PC -3 | Ability to develop animal<br>research programs using<br>special (instrumental)<br>and laboratory methods. | Animal Anatomy<br>Organic Chemistry<br>Biological physics<br>Physical and colloidal<br>chemistry<br>Biological chemistry<br>Veterinary<br>microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Physiology and<br>ethology of animals<br>Pathological physiology<br>Clinical diagnosis<br>Pathological anatomy<br>Instrumental diagnostic<br>methods<br>Toxicology<br>Obstetrics, gynecology<br>and andrology<br>Internal non-infectious<br>diseases<br>General surgery<br>Private Veterinary<br>surgery<br>Parasitology and<br>invasive diseases<br>Epizootology and<br>infectious diseases<br>Immunology<br>Veterinary deontology<br>Clinical laboratory<br>diagnostics<br>Laboratory diagnostics<br>of infectious and<br>invasive diseases<br>Veterinary and<br>industrial laboratories<br>with the basics of design<br>Diseases of productive<br>animals | Dermatology<br>Cardiology<br>Endocrinology<br>Nephrology<br>Reconstructive and<br>reconstructive<br>surgery<br>Veterinary<br>Ophthalmology<br>Animal Dentistry |

|       | 1                      | <b></b>                            |                  |
|-------|------------------------|------------------------------------|------------------|
|       |                        | Diseases of small pets             |                  |
|       |                        | Diseases of small pets             |                  |
|       |                        | Bee diseases and                   |                  |
|       |                        | entomophages                       |                  |
|       |                        | Fish pathology and                 |                  |
|       |                        | aquaculture                        |                  |
|       |                        | Diseases of exotic                 |                  |
|       |                        | animals                            |                  |
| PC -4 | The ability to conduct |                                    | Dermatology      |
|       | clinical studies of    |                                    | Cardiology       |
|       | animals using special  |                                    | Endocrinology    |
|       | (instrumental) and     |                                    | Nephrology       |
|       | laboratory methods to  | Biological chemistry               | Veterinary       |
|       |                        |                                    | •                |
|       | clarify the diagnosis. | Veterinary                         | Ophthalmology    |
|       |                        | microbiology and                   | Animal Dentistry |
|       |                        | mycology                           |                  |
|       |                        | Virology and                       |                  |
|       |                        | biotechnology                      |                  |
|       |                        | Physiology and                     |                  |
|       |                        | ethology of animals                |                  |
|       |                        | Pathological physiology            |                  |
|       |                        | Clinical diagnosis                 |                  |
|       |                        | Pathological anatomy               |                  |
|       |                        | Instrumental diagnostic            |                  |
|       |                        | methods                            |                  |
|       |                        | Obstetrics, gynecology             |                  |
|       |                        | and andrology                      |                  |
|       |                        | Internal non-infectious            |                  |
|       |                        | diseases                           |                  |
|       |                        | General surgery                    |                  |
|       |                        | Private Veterinary                 |                  |
|       |                        | •                                  |                  |
|       |                        | surgery<br>Parasitology and        |                  |
|       |                        | Parasitology and invasive diseases |                  |
|       |                        |                                    |                  |
|       |                        | Epizootology and                   |                  |
|       |                        | infectious diseases                |                  |
|       |                        | Clinical laboratory                |                  |
|       |                        | diagnostics                        |                  |
|       |                        | Laboratory diagnostics             |                  |
|       |                        | of infectious and                  |                  |
|       |                        | invasive diseases                  |                  |
|       |                        | Diseases of horses                 |                  |
|       |                        | Diseases of productive             |                  |
|       |                        | animals                            |                  |
|       |                        | Diseases of small pets             |                  |
|       |                        | Diseases of small pets             |                  |
|       |                        | Diseases of exotic                 |                  |
|       |                        | animals                            |                  |
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|-------|----------------------------|--------------------------|--------------------|
| PC -5 | The ability to make a      |                          | Dermatology        |
|       | diagnosis based on the     |                          | Cardiology         |
|       | analysis of anamnesis      | 5 05                     | Endocrinology      |
|       | data, general, special     |                          | Nephrology         |
|       | (instrumental) and         | ethology of animals      | Reconstructive and |
|       | laboratory research        | Breeding with the basics | reconstructive     |
|       | methods.                   | of private animal        | surgery            |
|       |                            | husbandry                | Veterinary         |
|       |                            | Feeding animals with     | Ophthalmology      |
|       |                            | the basics of feed       | Animal Dentistry   |
|       |                            | production               | 5                  |
|       |                            | Pathological physiology  |                    |
|       |                            | Clinical diagnosis       |                    |
|       |                            | Pathological anatomy     |                    |
|       |                            | Toxicology               |                    |
|       |                            | e:                       |                    |
|       |                            | Obstetrics, gynecology   |                    |
|       |                            | and andrology            |                    |
|       |                            | Internal non-infectious  |                    |
|       |                            | diseases                 |                    |
|       |                            | General surgery          |                    |
|       |                            | Private Veterinary       |                    |
|       |                            | surgery                  |                    |
|       |                            | Parasitology and         |                    |
|       |                            | invasive diseases        |                    |
|       |                            | Epizootology and         |                    |
|       |                            | infectious diseases      |                    |
|       |                            | Forensic veterinary      |                    |
|       |                            | examination and          |                    |
|       |                            | autopsy of animals       |                    |
|       |                            | Zoopsychology            |                    |
|       |                            | Diseases of horses       |                    |
|       |                            | Diseases of productive   |                    |
|       |                            | animals                  |                    |
|       |                            | Diseases of small pets   |                    |
|       |                            | Diseases of small pets   |                    |
|       |                            | Bee diseases and         |                    |
|       |                            | entomophages             |                    |
|       |                            | Fish pathology and       |                    |
|       |                            | aquaculture              |                    |
|       |                            | Diseases of exotic       |                    |
|       |                            | animals                  |                    |
| PC -6 | The ability to develop a   |                          | Dermatology        |
| 10-0  | •                          |                          | •••                |
|       | treatment plan for         | 5                        | Cardiology         |
|       | animals based on the       | microbiology and         | Endocrinology      |
|       | established diagnosis and  | mycology                 | Nephrology         |
|       | individual characteristics | Virology and             | Reconstructive and |
|       | of animals.                | biotechnology            | reconstructive     |
|       |                            | Pathological physiology  | surgery            |

|       |   | Veterinory                               | Veterinary       |
|-------|---|--|------------------|
|       |   | Veterinary<br>Pharmacology               | Ophthalmology    |
|       |   | Toxicology                               | Animal Dentistry |
|       |   | Obstetrics, gynecology                   | Annnar Denusu y  |
|       |   |  |                  |
|       |   | and andrology<br>Internal non-infectious |                  |
|       |   |  |                  |
|       |   | diseases                                 |                  |
|       |   | General surgery                          |                  |
|       |   | Private Veterinary                       |                  |
|       |   | surgery                                  |                  |
|       |   | Parasitology and                         |                  |
|       |   | invasive diseases                        |                  |
|       |   | Epizootology and                         |                  |
|       |   | infectious diseases                      |                  |
|       |   | Mathematics                              |                  |
|       |   | Immunology<br>Zaarawahalaaw              |                  |
|       |   | Zoopsychology                            |                  |
|       |   | Diseases of horses                       |                  |
|       |   | Diseases of productive                   |                  |
|       |   | animals                                  |                  |
|       |   | Diseases of small pets                   |                  |
|       |   | Diseases of small pets                   |                  |
|       |   | Bee diseases and                         |                  |
|       |   | entomophages                             |                  |
|       |   | Fish pathology and                       |                  |
|       |   | aquaculture                              |                  |
|       |   | Diseases of exotic                       |                  |
|       | The chility to choose the                           | animals                                  | Demostale are    |
| PC -7 | The ability to choose the                           | Inorganic and analytical                 | Dermatology      |
|       | necessary drugs of                                  | 5  | Cardiology       |
|       | chemical and biological<br>nature for the treatment | ÷ ,                                      | Endocrinology    |
|       |   | J  | Nephrology       |
|       | of animals, taking into                             | -  | Veterinary       |
|       | account their combined pharmacological effect       | e :                                      | Ophthalmology    |
|       | · .   | 2  | Animal Dentistry |
|       | on the body.  | microbiology and                         |                  |
|       |   | mycology<br>Virology and                 |                  |
|       |   | Virology and                             |                  |
|       |   | biotechnology<br>Pathological physiology |                  |
|       |   | Pathological physiology                  |                  |
|       |   | Veterinary                               |                  |
|       |   | Pharmacology                             |                  |
|       |   | Toxicology                               |                  |
|       |   | Obstetrics, gynecology                   |                  |
|       |   | and andrology                            |                  |
|       |   | Internal non-infectious                  |                  |
|       |   | diseases<br>General surgery              |                  |
|       |   | Leneral curgery                          |                  |

|       |   | Private Veterinary<br>surgery<br>Parasitology and<br>invasive diseases<br>Epizootology and<br>infectious diseases<br>Medicinal and<br>poisonous plants<br>Diseases of horses<br>Diseases of productive<br>animals<br>Diseases of small pets<br>Diseases of small pets<br>Bee diseases and<br>entomophages<br>Fish pathology and<br>aquaculture<br>Diseases of exotic<br>animals  |  |
|-------|---|--|--|
| PC -8 | Ability to choose<br>methods of non-drug<br>therapy, including<br>physiotherapy methods<br>for the treatment of<br>animals. | Veterinary<br>microbiology and<br>mycology<br>Virology and<br>biotechnology<br>Physiology and<br>ethology of animals<br>Feeding animals with<br>the basics of feed<br>production<br>Pathological physiology<br>Veterinary<br>Radiobiology<br>Internal non-infectious<br>diseases<br>General surgery<br>Private Veterinary<br>surgery<br>Diseases of horses<br>Diseases of productive<br>animals<br>Diseases of small pets<br>Diseases of exotic<br>animals | Dermatology<br>Cardiology<br>Endocrinology<br>Nephrology<br>Reconstructive and<br>reconstructive<br>surgery<br>Veterinary<br>Ophthalmology<br>Animal Dentistry |
| PC -9 | The ability to carry out<br>therapeutic, including<br>physiotherapy   | Animal anatomy<br>Life safety<br>Veterinary  | Dermatology<br>Cardiology<br>Endocrinology   |
|       | procedures using special  | microbiology and   | Nephrology   |

|        |                          |                            | Descriptions of 1  |
|--------|--------------------------|----------------------------|--------------------|
|        | equipment in compliance  | mycology<br>Vinala av an d | Reconstructive and |
|        | with safety rules.       | Virology and               | reconstructive     |
|        |                          | biotechnology              | surgery            |
|        |                          | Physiology and             | Veterinary         |
|        |                          | ethology of animals        | Ophthalmology      |
|        |                          | Pathological physiology    | Animal Dentistry   |
|        |                          | Veterinary                 |                    |
|        |                          | Radiobiology               |                    |
|        |                          | General surgery            |                    |
|        |                          | Private Veterinary         |                    |
|        |                          | surgery                    |                    |
|        |                          | Diseases of horses         |                    |
|        |                          | Diseases of productive     |                    |
|        |                          | animals                    |                    |
|        |                          | Diseases of small pets     |                    |
|        |                          | Diseases of small pets     |                    |
|        |                          | Diseases of exotic         |                    |
|        |                          | animals                    |                    |
| DC 11  | Ability to January       |                            | Domentals          |
| PC -11 | Ability to develop a     | Animal anatomy             | Dermatology        |
|        | surgical operation plan, | Veterinary                 | Cardiology         |
|        | including the choice of  | microbiology and           | Endocrinology      |
|        | analgesia method         | mycology                   | Nephrology         |
|        |                          | Physiology and             | Reconstructive and |
|        |                          | ethology of animals        | reconstructive     |
|        |                          | Pathological physiology    | surgery            |
|        |                          | Veterinary                 |                    |
|        |                          | Pharmacology               |                    |
|        |                          | Pathological anatomy       |                    |
|        |                          | Operative surgery with     |                    |
|        |                          | topographic anatomy        |                    |
|        |                          | Obstetrics, gynecology     |                    |
|        |                          | and andrology              |                    |
|        |                          | General surgery            |                    |
|        |                          | Private Veterinary         |                    |
|        |                          | surgery                    |                    |
| PC -13 | Ability to develop       | Physiology and             | Dermatology        |
| 10-15  | recommendations for      | ethology of animals        | Cardiology         |
|        | special feeding of sick  | Feeding animals with       | Endocrinology      |
|        |                          | the basics of feed         |                    |
|        | animals for therapeutic  |                            | Nephrology         |
|        | purposes.                | production                 |                    |
|        |                          | Pathological physiology    |                    |
|        |                          | Internal non-infectious    |                    |
|        |                          | diseases                   |                    |
|        |                          | General surgery            |                    |
|        |                          | Private Veterinary         |                    |
|        |                          | surgery                    |                    |
|        |                          | Medicinal and              |                    |
|        |                          | poisonous plants           |                    |
| L      | 1                        |                            | 1                  |

|        |   | Forage plants           |  |
|--------|---|-------------------------|--|
| PC -14 | The ability to conduct<br>repeated examinations<br>and studies of animals to<br>assess the effectiveness<br>and safety of the<br>prescribed treatment plan<br>of animals (if necessary)<br>based on the results of<br>the evaluation of the<br>effectiveness of<br>treatment. | Instrumental diagnostic | Dermatology<br>Cardiology<br>Endocrinology<br>Nephrology<br>Reconstructive and<br>reconstructive<br>surgery<br>Veterinary<br>Ophthalmology<br>Animal Dentistry |

### 4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "Anesthesiology, resuscitation and intensive care" is 3 credits.

Table 4.1. Types of academic activities during the period of the HE program mastering for *full-time* study

| Types of academic activities | HOURS | Semesters |   |   |   |
|------------------------------|-------|-----------|---|---|---|
| Types of academic activities |       | 9         | - | - | - |
| Contact academic hours       | 54    | 54        | - | - | - |
| including                    |       |           |   |   |   |
| Lectures                     | 18    | 18        | - | - | - |
| Lab work                     | 36    | 36        | - | - | - |

| Seminars (workshops/tutorials)     | -        | -   | -   | - | - |   |
|------------------------------------|----------|-----|-----|---|---|---|
| Self-study                         | 38       | 38  | -   | - | - |   |
| Evaluation and assessment grading) |          |     | 16  | - | - | - |
|                                    | Academic | 108 | 108 | - | - | - |
| Course workload                    | hour     |     |     |   |   |   |
| Course workload Credit             |          | 3   | 3   | - | - | - |
|                                    | unit     |     |     |   |   |   |

Table 4.2. Types of academic activities during the period of the HE program mastering for **part-time** study

| Types of academic activities           |              | HOURS |     | Seme | esters |   |
|--|--------------|-------|-----|------|--------|---|
|  |              |       | Α   | -    | -      | - |
| Contact academic hours                 |              | 36    | 36  | -    | -      | - |
| including                              |              |       |     |      |        |   |
| Lectures                               |              | _     | -   | -    | -      | - |
| Lab work                               |              | 36    | 36  | -    | -      | - |
| Seminars (workshops/tutorials)         |              | _     | -   | -    | -      | - |
| Self-study                             |              | 62    | 62  | -    | -      | - |
| Evaluation and assessment (exagrading) | am/pass/fail | 10    | 10  | -    | -      | - |
|  | Academic     | 108   | 108 | -    | -      | - |
| Course workload<br>Credit<br>unit      |              |       |     |      |        |   |
|  |              | 3     | 3   | -    | -      | - |
|  |              |       |     |      |        |   |

# **5. CONTENT OF THE DISCIPLINE**

| Table 5.1 Content | of the discipline | (module) by type | of academic work |
|-------------------|-------------------|------------------|------------------|
|                   | o,                | (                |                  |

| Name of the discipline<br>section  | Content of the section (topics)   | Types of<br>academic<br>activities |
|--|---|------------------------------------|
| Section 1. General<br>concepts of<br>anesthesiology, intensive<br>care and intensive care.                               | Topic 1.1. General concepts of<br>anesthesiology, intensive care and<br>intensive care. | Lectures, Lab<br>work.             |
|  | Topic 1.2. Legal issues.  | Lectures, Lab<br>work.             |
|  | Topic 1.3. Intraoperative patient monitoring.   | Lectures, Lab<br>work.             |
| Section 2. Methods,<br>pharmacological means<br>and techniques of<br>analgesia, premedication<br>and anesthetic support. | Topic 2.1. Types and stages of anesthesia.  | Lectures, Lab<br>work.             |
|  | Topic 2.2. Inhalation anesthesia.   | Lectures, Lab<br>work.             |
|  | Topic 2.3. Local anesthesia.  | Lectures, Lab<br>work.             |

|   | Topic 2.4. Infusion therapy.                 | Lectures, Lab<br>work. |
|---|--|------------------------|
|   | Topic 2.5. Acute blood loss.                 | Lectures, Lab<br>work. |
|   | Topic 2.6. Cardiopulmonary resuscitation.    | Lectures, Lab<br>work. |
| Section 3. Anesthesia of particularly difficult | Topic 3.1. Anesthesiology of diabetics.      | Lectures, Lab<br>work. |
| patients.                                       | Topic 3.2. Anesthesiology in ophthalmology.  | Lectures, Lab<br>work. |
|   | Topic 3.3. Anesthesiology of exotic animals. | Lectures, Lab<br>work. |
|   | Topic 3.4. Anesthesiology in neurology.      | Lectures, Lab<br>work. |
|   | Topic 3.5. Physiology of CPP, IP.            | Lectures, Lab<br>work. |

# 6. CLASSROOM INFRASTRUCTURE AND TECHNOLOGY SUPPORT REQUIREMENTS

| Classroom for<br>Academic<br>Activity Type | Equipping the classroom  | Specialized<br>educational/laboratory<br>equipment, software and<br>materials for the development<br>of the discipline (if necessary) |
|--|--|---|
| Lecture                                    | An auditorium for conducting<br>lecture-type classes, equipped with a<br>set of specialized furniture; a board<br>(screen) and technical means of<br>multimedia presentations.   | -   |
| Laboratory                                 | An auditorium for laboratory work,<br>individual consultations, routine<br>monitoring and interim certification,<br>equipped with a set of specialized<br>furniture and equipment.   | -   |
| Self-studies                               | An auditorium for independent work<br>of students (can be used for seminars<br>and<br>consultations), equipped with a set of<br>specialized furniture and computers<br>with access to an electronic<br>information and educational | -   |

Table 6.1. Material and technical support of the discipline

| environment. |  |
|--------------|--|
|              |  |
|              |  |
|              |  |
|              |  |

# 7. RECOMMENDED SOURCES FOR COURSE STUDIES

## Main reading:

- Sakhno N. V., Vatnikov Yu. A., Yagnikov S. A., Shadskaya A.V., Shevchenko A. N., Tutkyshbai I. A., Andreeva O. N., Troshina N. I. Methodology of veterinary surgery training 2020.-184 p. https://e.lanbook.com/book/133910
- 2. Baymatov V.N. Workshop on pathological physiology: 2017.-352p. https://e.lanbook.com/book/94207
- 3. Berdnikova L. N. Biomedical fundamentals of life safety: A course of lectures 2019.-205 p. https://e.lanbook.com/book/149591
- 4. Khulelidze N. G. Nursing care in surgery. Course of lectures: textbook for SPO 2021.-360 p. https://e.lanbook.com/book/151195

Additional Reading:

- 1. Klimovich S. S., Maskin S. S., Matyukhin V. V. Intestinal insufficiency syndrome in patients with acute abdominal surgical pathology 2019.-148p. https://e.lanbook.com/book/141150
- 2. Fundamentals of veterinary physiotherapy: Textbook 2020.-108 p. https://e.lanbook.com/book/155050
- 3. Pavlov S. A., Kusheev C. B., Lomboeva S. S. Veterinary dentistry: A textbook for classes in veterinary dentistry for students studying in the specialty 36.05.01 Veterinary Medicine 2018.-124p. https://e.lanbook.com/book/143174
- 4. Semenov B. S., Videnin V. N., Nechaev A. Yu., Kuznetsova T. S., Guseva V. A. Operative surgery in animals 2021.-704p. https://e.lanbook.com/book/162365

Resources of the Internet information and telecommunication network:

1. Electronic library system of RUDN and third-party Electronic library systems to which university students have access on the basis of concluded contracts:

- Electronic library system of RUDN - ELS RUDN http://lib.rudn.ru/MegaPro/Web

- ELS "University Library online"<u>http://www.biblioclub.ru</u>
- ELS Yurayt http://www.biblio-online.ru
- ELS "Student Consultant"<u>www.studentlibrary.ru</u>
- ELS "Lan"<u>http://eZlanbook.com/</u>
- ELS "Trinity Bridge"<u>http://www.trmost.com/</u>
- 2. Databases and search engines:
- electronic fund of legal and regulatory and technical documentation http://docs.cntd.ru/

- search engine Yandex https://www.yandex.ru/

- search engine Google <u>https://www.google.ru/</u>

- abstract database SCOPUS <u>http://www.elsevierscience.ru/products/scopus/</u>

Educational and methodological materials for independent work of students during the development of the discipline/ module\*:

- 1. A course of lectures on the discipline "Anesthesiology, resuscitation and intensive care".
- 2. Laboratory workshop on the discipline "Anesthesiology, resuscitation and intensive care".

\* - All educational and methodological materials for independent work of students are placed in accordance with the current procedure on the discipline page in the <u>Telecommunication educational and Information System!</u>

### 8. MID-TERM ASSESSMENT

Evaluation materials and a point-rating system<sup>\*</sup> for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline "Anesthesiology, resuscitation and intensive care" are presented in the Appendix to this Work Program of the discipline.

\* - Assessment Materials and a Point Rating System are formed based on the requirements of the relevant local regulatory act of the RUDN.

### **DEVELOPER:**

| Professor of the Department of Veterinary Medicine |           | Vatnikov Yu.A. |
|--|-----------|----------------|
| Position, Basic curriculum                         | Signature | Full name.     |

### **HEAD OF THE DEPARTMENT:**

Department of Veterinary Medicine

Name Basic Curriculum

Vatnikov Yu.A.

Signature

Signature

### **HEAD OF THE HIGHER EDUCATION PROGRAM:**

Director of the Department of Veterinary Medicine

Position, Basic curriculum

Vatnikov Yu.A. Full name