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**Federal State Autonomous Educational Institution for Higher Education PEOPLES'
FRIENDSHIP UNIVERSITY OF RUSSIA
Agrarian and Technological Institute**

WORKING COURSE SYLLABUS

General surgery

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 "**General Surgery**" is the formation of a wide-profile specialist, the ability to perform not only complex surgical interventions, but also the ability to organize and conduct preventive and therapeutic measures.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "**General Surgery**" 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 accomplishment (within the discipline)
UK-1	The ability to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of action.	UK-1.1 Analyzes the task, highlighting its basic components;
		UK-1.2 Defines and ranks the information required to solve the task;
		UK -1.3 Searches for information to solve the task by various types of queries;
		UK-1.4 Offers solutions to the problem, analyzes the possible consequences of their use;
		UK -1.5 Analyzes the ways of solving problems of a philosophical, moral and personal nature based on the use of basic philosophical ideas and categories in their historical development and socio-cultural context.
UK -3	The ability to organize and manage the work of the team, developing a team strategy to achieve the goal.	UK-3.1 Defines his role in the team based on the strategy of cooperation to achieve the goal;
		UK-3.2 Formulates and takes into account in its activities the peculiarities of the behavior of groups of people, identified depending on the goal;
		UK-3.3 Analyzes the possible consequences of personal actions and plans his actions to achieve the desired result;
		UK-3.4 Exchanges information, knowledge and experience with team members;
		UK -3.5 Argues his point of view regarding the use of the ideas of other

		team members to achieve the goal;
		UK -3.6 Participates in team work on the execution of assignments.
UK -6	The ability to determine and implement the priorities of one's own activity and ways to improve it based on self-assessment and lifelong education.	UK-6.1 Controls the amount of time spent on specific activities;
		UK-6.2 Develops tools and methods of time management when performing specific tasks, projects, goals;
		UK -6.3 Analyzes its resources and their limits (personal, situational, temporary, etc.), for the successful completion of the task;
		UK -6.4 Finds and uses sources of additional information to increase the level of general and professional knowledge;
		UK -6.5 Analyzes the main opportunities and tools of continuing education in relation to their own interests and needs, taking into account the conditions, means, personal capabilities, stages of career growth, time prospects for the development of activities and the requirements of the labor market;
		UK -6.6 Defines the tasks of self-development, goals and priorities of professional growth;
		UK -6.7 Distributes tasks into long-, medium- and short-term ones with justification of relevance and analysis of resources for their implementation.
GPC-2	The ability to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on the physiological state of the animal organism.	GPC-2.1 Has knowledge of the influence of natural, socio-economic, genetic and economic factors on the animal body.
		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.
		GPC-2.3 Possesses methods of preventive and curative correction of the effects of adverse environmental factors that can cause deterioration of animal health.
GPC -4	The ability to use methods of solving problems using modern equipment in the development of new technologies in professional activity and to use	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.

	modern professional methodology for conducting experimental research and interpreting their results.	<p>GPC-4.2 He knows the methods of solving problems using modern equipment.</p> <p>GPC-4.3 He is ready to use modern methodology in the development and conduct of experimental research.</p> <p>GPC-4.4 Uses modern professional methodology in interpreting research results.</p>
GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	<p>GPC-6.1 Has knowledge in the field of etiology and pathogenesis of animal diseases of different species.</p> <p>GPC-6.2 Has the skills to diagnose non-infectious, infectious and invasive diseases, identify pathogens of infectious and invasive diseases in animals.</p> <p>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.</p>
PC -1	The ability to collect anamnesis of life and disease of animals to identify the causes of diseases and their nature.	<p>PC -1.1 He is able to collect an anamnesis of the animal's life and reflect this in the relevant service documentation.</p> <p>PC-1.2 He is able to collect the anamnesis of the animal's disease and reflect it in the patient's medical history.</p> <p>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.</p>
PC -3	Ability to develop animal research programs using special (instrumental) and laboratory methods.	<p>PC-3.1 He is able to develop individual animal research programs, including the use of special (instrumental) and laboratory methods to detect deviations from the physiological norm of the state of a living organism, conduct differential diagnosis of the detected pathology or control the course of the disease and the effectiveness of the prescribed treatment.</p> <p>PC-3.2 Capable of developing mass comprehensive animal research programs (medical examination programs) of</p>

		animals, taking into account their type and purpose, both general and special.
PC -4	The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis.	PC-4.1 Able to conduct additional animal studies using laboratory methods to clarify the 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 based on the analysis of anamnesis data, general, special (instrumental) and laboratory 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 treatment plan for animals based on the established diagnosis and individual characteristics of animals.	PC-6.1 Able to develop a treatment plan for animals based on the established diagnosis and individual characteristics of animals.
		PC-6.2 He is able to develop recommendations on therapeutic and preventive manipulations to prevent diseases, the high probability of which was revealed during the study of the patient.
		PC-6.3 He is able to develop recommendations for carrying out preventive and curative measures based on the results of the examination of animals carried out as part of the medical 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 chemical and biological nature necessary for the treatment of animals, guided by the principles of evidence-based medicine, taking into account their combined 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, frequency and duration of the course of application of the drug to the patient,

		<p>taking into account the form of release and the characteristics of the administration of the drug to the patient.</p> <p>PC-7.4 He is able to take into account drug interactions when prescribing a course of treatment to an animal already receiving medications and biologically active additives due to the presence of diseases identified earlier.</p> <p>PC-7.5 He is able to take into account economic, species and age characteristics, as well as the results of laboratory studies of the patient when choosing drugs for the treatment of the patient.</p>
PC -8	Ability to choose methods of non-drug therapy, including physiotherapy methods for the treatment of animals.	<p>PC-8.1 He is able to choose and justify his choice of methods of non-drug therapy, including physiotherapy methods, for the treatment of animals;</p> <p>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.</p>
PC -9	The ability to carry out therapeutic, including physiotherapy procedures using special equipment in compliance with safety rules.	<p>PC-9.1 Able to carry out therapeutic, including physiotherapy, procedures using special equipment in compliance with safety rules;</p> <p>PC -9.2 He is able to take into account the species, age and individual characteristics of animals undergoing treatment using special equipment, choose acceptable methods of fixing the patient during the procedure, the conditions of the procedures and their duration.</p>
PC -10	The ability to determine the need for the use of surgical methods in the treatment of animals.	<p>PC-10.1 Able to determine the need for the use of surgical methods in the treatment of animals;</p> <p>PC-10.2 Able to choose the optimal surgical method for the patient, taking into account the external conditions and the status of the patient's body, and if necessary, several manipulations - their order and time distribution;</p> <p>PC-10.3 He is able to take into account the risks and possible complications accompanying surgical interventions and take measures to prevent them.</p>

PC -11	Ability to develop a surgical operation plan, including the choice of analgesia method	PC-11.1 Able to develop a surgical operation plan;
		PC-11.2 He is able to choose and justify the optimal variant of anesthesia of the patient during surgery and in the postoperative period.
PC -13	Ability to develop recommendations for special feeding of sick animals for therapeutic purposes.	PC-13.1 He is able to justify the appointment of special feeding to an animal for therapeutic purposes in various diseases;
		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;
		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 compilation of individual therapeutic diets for animals of various species.
PC -14	The ability to conduct repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment and adjust the treatment plan of animals (if necessary) based on the results of the evaluation of the effectiveness of treatment.	PC-14.1 He is able to develop a plan of repeated studies necessary and sufficient to assess the predicted changes in the patient's health.
		PC-14.2 Able to conduct a repeated clinical examination, taking into account the specifics of diseases previously diagnosed in the patient.
		PC-14.3 Able to carry out the necessary repeated instrumental and laboratory tests.
		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.
PC -16	Ability to organize organizational, technical, zootechnical and veterinary measures aimed at the prevention of non-communicable diseases in accordance with the plan for the prevention of non-communicable animal diseases	PC-16.1 He is able to assess the impact of animal housing and feeding conditions on their health as part of the implementation of action plans for the prevention of animal diseases
		PC-16.2 He is able to carry out veterinary quality control and procurement of animal feed in order to ensure their veterinary and sanitary safety as part of the implementation of action plans for the prevention of animal diseases

		<p>PC-16.3 He is able to detect deviations from the plan of timing, types, quality of measures to prevent the occurrence of non-infectious animals</p> <p>PC-16.4 Take corrective measures to implement measures to prevent the occurrence of non-infectious animal diseases based on the results of control</p> <p>PC-16.5 Conduct conversations, lectures, seminars for employees of the organization in order to explain the principles of work on the prevention of animal diseases</p>
PC -18	The ability to draw up a plan for the medical examination of animals, taking into account their types and purpose, to conduct medical examinations, to develop recommendations for carrying out preventive and curative measures based on the results of the examination of animals conducted as part of the medical examination	<p>PC-18.1 He is able to make a plan for the medical examination of animals, general or specialized, taking into account their types and purpose</p> <p>PC-18.2 He is able to organize and conduct medical examination according to the drawn up plan</p> <p>PC-18.3 He is able, based on the results of medical examination, to give recommendations on the implementation of therapeutic and preventive and curative measures aimed at improving the health of a group of animals</p>
PC -19	The ability to perform post-mortem diagnostic examination of animals in order to establish pathological processes, diseases, causes of death.	<p>PC-19.1 Able to conduct a general examination of animal corpses before autopsy.</p> <p>PC-19.2 He is capable of performing autopsy of animal corpses using special tools and compliance with safety requirements.</p> <p>PC -19.3 He is able to establish the cause of death and a pathoanatomic diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases.</p> <p>PC-19.4 He is able to formalize the results of a postmortem diagnostic examination of an animal in the autopsy protocol.</p>
PC -20	Ability to develop an annual plan of antiepzootic measures, a plan for the prevention of non-infectious animal diseases, a plan of veterinary and sanitary measures.	<p>PC-20.1 Able to conduct epizootological examination of the organization, territory.</p> <p>PC-20.2 He is able to develop an annual plan of antiepzootic and antiparasitic measures, a plan for the prevention of non-infectious animal diseases, a plan of</p>

		veterinary and sanitary measures.
		PC-20.3 He is able to analyze the effectiveness of measures for the prevention of animal diseases in order to improve them.
PC -23	The ability to analyze the effectiveness of measures for the prevention of animal diseases in order to improve them.	PC-23.1 He is capable of collecting and analyzing information, including veterinary statistics data, necessary to assess the effectiveness of preventive antiepidemiologic measures, prevention of non-infectious animal diseases, veterinary and sanitary measures.
		PC-23.2 Able to evaluate the effectiveness of preventive measures and methods of their implementation, including using special software.
		PC -23.3 He is able to make suggestions on the correction of measures for the prevention of animal diseases on the basis of the analysis carried out.
PC -24	Ability and willingness to promote veterinary knowledge, including in the field of prevention of animal diseases.	PC-24.1 He is able to set goals in the field of veterinary knowledge promotion, plan the strategy and tactics of upcoming events.
		PC-24.2 He is able to use computer and telecommunication facilities for the preparation and demonstration of materials used in the process of promoting veterinary knowledge.
		PC-24.3 He is able to conduct conversations, lectures, seminars for employees of the organization in order to explain the principles of work on the prevention of animal diseases.

3. COURSE IN HIGHER EDUCATION

The discipline "**General Surgery**" refers to the mandatory part of 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 "**General Surgery**".

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

Comp etence code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
UK -1	The ability to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of action	History Philosophy Life safety Mathematics Fundamentals of Economics and Management	Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Organization of veterinary business Veterinary deontology Fundamentals of intellectual work Zoopsychology Organization of state veterinary supervision Career Management Space technologies in the service of the agro-industrial complex Reconstructive and reconstructive surgery
UK -3	The ability to organize and manage the work of the team, developing a team strategy to achieve the goal	Jurisprudence Life safety Fundamentals of rhetoric and communication Introduction to the specialty Fundamentals of Economics and Management Mathematics	Operative surgery with topographic anatomy Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Organization of veterinary business Veterinary sanitation Veterinary deontology Fundamentals of intellectual work Personality psychology and professional self-determination Fundamentals of social and legal knowledge

UK -6	The ability to determine and implement the priorities of one's own activity and ways to improve it based on self-assessment and lifelong education	Philosophy Mathematics Introduction to the specialty	Internal non-infectious diseases Private Veterinary surgery Epizootology and infectious diseases Organization of veterinary business Veterinary deontology Fundamentals of intellectual work Personality psychology and professional self-determination Career Management Fundamentals of social and legal knowledge Reconstructive and reconstructive surgery
GPC - 2	The ability to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on the physiological state of the animal organism.	Biology with the basics of ecology Veterinary genetics Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Breeding with the basics of private animal husbandry Forage plants Animal Health Immunology General and veterinary ecology Pathological anatomy Instrumental diagnostic methods Toxicology Pathological physiology Veterinary Radiobiology	Animal health and welfare Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Forensic veterinary examination and autopsy of animals Veterinary sanitation 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 Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology

			Nephrology Veterinary Ophthalmology Animal Dentistry
GPC - 4	The ability to use methods of solving problems using modern equipment in the development of new technologies in professional activity and to use modern professional methodology for conducting experimental research and interpreting their results.	Inorganic and analytical chemistry Organic Chemistry Biological physics Computer science Instrumental diagnostic methods Toxicology Physical and colloidal chemistry Cytology, histology and embryology Biological chemistry Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Breeding with the basics of private animal husbandry Pathological physiology Medicinal and poisonous plants Forage plants Mathematics Veterinary Radiobiology Pathological anatomy Operative surgery with topographic anatomy Immunology	Clinical diagnosis Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary sanitation Technology of processing livestock products 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 Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
GPC - 6	The ability to analyze, identify and assess the	Biology with the basics of ecology	Clinical diagnosis Toxicology

	risk of the risk of the occurrence and spread of diseases.	<p>Life safety Instrumental diagnostic methods Veterinary microbiology and mycology Virology and biotechnology Animal health and welfare Feeding animals with the basics of feed production Introduction to the specialty Medicinal and poisonous plants Forage plants Animal Health General and veterinary ecology Veterinary Radiobiology Pathological anatomy</p>	<p>Obstetrics, gynecology and andrology Internal non-infectious diseases 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 Veterinary sanitation Technology of processing livestock products 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 Veterinary Ophthalmology Animal Dentistry</p>
PC -1	The ability to collect anamnesis of life and disease of animals to identify the causes of diseases and their nature	<p>Veterinary genetics Physiology and ethology of animals Breeding with the basics of private animal husbandry Animal health and welfare</p>	<p>Clinical diagnosis Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases</p>

		<p>Feeding animals with the basics of feed production</p> <p>Fundamentals of rhetoric and communication</p> <p>Toxicology</p>	<p>Epizootology and infectious diseases</p> <p>Veterinary deontology</p> <p>Zoopsychology</p> <p>Animal Health</p> <p>Personality psychology and professional self-determination</p> <p>Diseases of horses</p> <p>Diseases of productive animals</p> <p>Diseases of small pets</p> <p>Diseases of small pets</p> <p>Diseases of exotic animals</p> <p>Anesthesiology, intensive care and intensive care</p> <p>Dermatology</p> <p>Cardiology</p> <p>Endocrinology</p> <p>Nephrology</p> <p>Reconstructive and reconstructive surgery</p> <p>Veterinary Ophthalmology</p> <p>Animal Dentistry</p>
PC -3	<p>Ability to develop animal research programs using special (instrumental) and laboratory methods</p>	<p>Cytology, histology and embryology</p> <p>Life safety</p> <p>Pathological anatomy</p> <p>Toxicology</p>	<p>Obstetrics, gynecology and andrology</p> <p>Internal non-infectious diseases</p> <p>Private Veterinary surgery</p> <p>Parasitology and invasive diseases</p> <p>Epizootology and infectious diseases</p> <p>Veterinary and sanitary examination</p> <p>Forensic veterinary examination and autopsy of animals</p> <p>Clinical laboratory diagnostics</p> <p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Diseases of horses</p> <p>Diseases of productive animals</p> <p>Diseases of small pets</p> <p>Bee diseases and</p>

			entomophages Fish pathology and aquaculture Diseases of exotic animals Dermatology Cardiology Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry
PC -4	The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis	Animal anatomy Biological physics Cytology, histology and embryology Biological chemistry Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology Pathological anatomy Instrumental diagnostic methods	Clinical diagnosis Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery 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 Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry
PC -5	The ability to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods	Veterinary genetics Cytology, histology and embryology Physiology and ethology of animals Breeding with the basics of private animal husbandry Feeding animals with the	Clinical diagnosis Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and

		<p>basics of feed production Pathological physiology Pathological anatomy Toxicology</p>	<p>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 Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
PC -6	<p>Ability to develop an animal treatment plan based on the established diagnosis and individual characteristics of animals</p>	<p>Veterinary genetics Veterinary microbiology and mycology Virology and biotechnology Pathological physiology Veterinary Pharmacology Toxicology Mathematics Immunology</p>	<p>Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases 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 Anesthesiology, intensive care and intensive care Dermatology</p>

			<p>Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
PC -7	<p>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</p>	<p>Inorganic and analytical chemistry Organic Chemistry Physical and colloidal chemistry Biological chemistry Veterinary microbiology and mycology Virology and biotechnology Pathological physiology Veterinary Pharmacology Toxicology Medicinal and poisonous plants</p>	<p>Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious 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 Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry</p>
PC -8	<p>Ability to choose methods of non-drug therapy, including physiotherapeutic methods for the treatment of animals</p>	<p>Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Feeding animals with the basics of feed production Pathological physiology Veterinary Radiobiology</p>	<p>Internal non-infectious diseases Private Veterinary surgery Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology</p>

			<p>Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
PC -9	<p>The ability to carry out therapeutic, including physiotherapy procedures using special equipment in compliance with safety rules</p>	<p>Animal anatomy Life safety Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology</p>	<p>Veterinary Radiobiology Private Veterinary surgery Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
PC -10	<p>The ability to determine the need for the use of surgical methods in the treatment of animals</p>	<p>Veterinary genetics Cytology, histology and embryology Veterinary microbiology and mycology Physiology and ethology of animals Pathological physiology Pathological anatomy</p>	<p>Clinical diagnosis Obstetrics, gynecology and andrology Private Veterinary surgery Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>

PC -11	Ability to develop a surgical operation plan, including the choice of analgesia method	Animal anatomy Veterinary microbiology and mycology Physiology and ethology of animals Pathological physiology Veterinary Pharmacology Pathological anatomy Operative surgery with topographic anatomy	Obstetrics, gynecology and andrology Private Veterinary surgery Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery
PC -13	Ability to develop recommendations for special feeding of sick animals for therapeutic purposes	Physiology and ethology of animals Feeding animals with the basics of feed production Pathological physiology Forage plants Medicinal and poisonous plants	Internal non-infectious diseases Private Veterinary surgery Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology
PC -14	The ability to conduct repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment and adjust the treatment plan of animals (if necessary) based on the results of the evaluation of the effectiveness of treatment	Cytology, histology and embryology Physiology and ethology of animals Pathological physiology Pathological anatomy Toxicology Veterinary Pharmacology	Clinical diagnosis Instrumental diagnostic methods Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Clinical laboratory diagnostics Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery

			Veterinary Ophthalmology Animal Dentistry
PC -16	Ability to organize organizational, technical, zootechnical and veterinary measures aimed at the prevention of non-communicable diseases in accordance with the plan for the prevention of non-communicable animal diseases	Veterinary genetics Life safety Physiology and ethology of animals Breeding with the basics of private animal husbandry Feeding animals with the basics of feed production Fundamentals of Economics and Management Medicinal and poisonous plants Forage plants Animal Health	Animal health and welfare Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Organization of veterinary business Economics and organization of agricultural production 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 Veterinary Ophthalmology Animal Dentistry
PC -18	The ability to draw up a plan for the medical examination of animals, taking into account their types and purpose, to conduct medical examinations, to develop recommendations for carrying out preventive and curative measures based on the results of the examination of animals conducted as part of the medical examination	Veterinary genetics Physiology and ethology of animals Breeding with the basics of private animal husbandry Animal health and welfare Feeding animals with the basics of feed production Pathological physiology Animal Health Pathological anatomy Toxicology Veterinary Pharmacology	Clinical diagnosis Instrumental diagnostic methods Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Clinical laboratory diagnostics Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Dermatology Cardiology

			Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry
PC -19	Ability to perform post-mortem diagnostic examination of animals in order to establish pathological processes, diseases, causes of death	Animal anatomy Cytology, histology and embryology Life safety Toxicology Pathological anatomy	Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Forensic veterinary examination and autopsy of animals Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Diseases of horses Diseases of productive animals Diseases of small pets Bee diseases and entomophages Fish pathology and aquaculture Diseases of exotic animals Dermatology Cardiology Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry
PC -20	Ability to develop an annual plan of antiepzootic measures, a plan for the prevention of non-infectious animal diseases, a plan of veterinary and sanitary measures	Veterinary microbiology and mycology of animals Feeding animals with the basics of feed production Fundamentals of Economics and Management	Internal non-infectious diseases Health and well-being Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases

		Animal Health	Organization of veterinary business Veterinary sanitation Economics and organization of agricultural production Bee diseases and entomophages Fish pathology and aquaculture
PC -23	Ability to analyze the effectiveness of measures for the prevention of animal diseases in order to improve them	Breeding with the basics of private animal husbandry Toxicology Fundamentals of Economics and Management Animal Health	Animal health and welfare Internal non-infectious diseases 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 Veterinary sanitation Economics and organization of agricultural production Organization of state veterinary supervision Bee diseases and entomophages Fish pathology and aquaculture
PC -24	Ability and willingness to promote veterinary knowledge, including in the field of prevention of animal diseases	Physiology and ethology of animals Breeding with the basics of private animal husbandry Feeding animals with the basics of feed production Pathological physiology Pathological anatomy Toxicology Fundamentals of rhetoric and communication Medicinal and poisonous	Animal health and welfare Obstetrics, gynecology and andrology Internal non-infectious diseases Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary sanitation Veterinary deontology Economics and

		plants Forage plants Foreign language for special purposes Russian for special purposes Foreign language. Translation of special texts Introduction to the specialty Russian language. Translation of special texts Foreign language. Professional communications Russian language. Professional communications General and veterinary ecology Animal Health Zoopsychology	organization of agricultural production 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 Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
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4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "General Surgery" is 4 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				
			7	-	-	-	
Contact academic hours		72	72	-	-	-	
including							
Lectures		18	18	-	-	-	
Lab work		54	54	-	-	-	
Seminars (workshops/tutorials)		-	-	-	-	-	
Self-study		56	56	-	-	-	
Evaluation and assessment (exam/pass/fail grading)		16	16	-	-	-	
Course workload		Academic hour	144	144	-	-	-
		Credit unit	4	4	-	-	-

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

Types of academic activities		HOURS	Semesters				
			7	-	-	-	
Contact academic hours		36	36	-	-	-	
including							
Lectures		18	18	-	-	-	
Lab work		18	18	-	-	-	
Seminars (workshops/tutorials)		-	-	-	-	-	
Self-study		94	94	-	-	-	
Evaluation and assessment (exam/pass/fail grading)		14	14	-	-	-	
Course workload		Academic hour	144	144	-	-	-
		Credit unit	4	4	-	-	-

5. CONTENT OF THE DISCIPLINE

Table 5.1 Content of the discipline (module) by type of academic work

Name of the discipline section	Content of the section (topics)	Types of academic activities
Section 1. Inflammation. Surgical infection.	Topic 1.1 Trauma. Traumatic illness	Lectures, Lab work.
	Topic 1.2 Diagnosis of inflammatory processes.	Lectures, Lab work.
	Topic 1.3 Features of the course of inflammatory processes in the skin, subcutaneous fat, muscles, tendon-ligamentous apparatus, body cavities.	Lectures, Lab work.
	Topic 1.4 Surgical infection. Local manifestations.	Lectures, Lab work.
	Topic 1.5 Surgical infection. Systemic manifestations.	Lectures, Lab work.
	Topic 1.6 Treatment of inflammatory processes by methods of etiologic and pathogenetic therapy.	Lectures, Lab work.
Section 2. Closed mechanical damages.	Topic 2.1 Classification of closed mechanical damages.	Lectures, Lab work.
	Topic 2.2 Methods of diagnosis of ZMP.	Lectures, Lab work.
	Topic 2.3 Differential diagnosis of hematomas, extravasates, abscesses.	Lectures, Lab work.
	Topic 2.4 Bone injuries. Injuries of the tendon-ligamentous apparatus.	Lectures, Lab work.
	Topic 2.5 Injuries of soft tissues and internal	Lectures, Lab

	organs.	work.
Section 3. Biology of the wound process.	Topic 3.1 Types of wounds, features of diagnosis and treatment of certain types of wounds.	Lectures, Lab work.
	Topic 3.2 Drains, types, methods of setting drains.	Lectures, Lab work.
	Topic 3.3 Granulation tissue.	Lectures, Lab work.
	Topic 3.4 Features of the wound process in different animal species.	Lectures, Lab work.
	Topic 3.5 Features of wound treatment and complications.	Lectures, Lab work.
Section 4. Private surgery.	Topic 4.1 Surgical diseases in the head and neck.	Lectures, Lab work.
	Topic 4.2 Surgical diseases in the chest and abdomen.	Lectures, Lab work.
	Topic 4.3 Surgical diseases of the abdominal wall and abdominal organs. Herniotomy.	Lectures, Lab work.
	Topic 4.4 Urogenital surgery. Castration.	Lectures, Lab work.
Section 5. Veterinary orthopedics.	Topic 5.1 Diagnostics and therapy of limb diseases.	Lectures, Lab work.
Section 6. Veterinary ophthalmology.	Topic 6.1 Diagnosis and therapy of eye diseases.	Lectures, Lab work.

6. CLASSROOM INFRASTRUCTURE AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the discipline

<i>Classroom for Academic Activity Type</i>	<i>Equipping the classroom</i>	Specialized educational/laboratory equipment, software and materials for the development of the discipline (if necessary)
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	<i>-Surgical instruments</i>
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	<i>-Surgical instruments</i>

Self-studies	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to an electronic information and educational environment.	-
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7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main reading:

1. General veterinary surgery: textbook / S.V. Pozyabin, Yu.I. Filippov, N.A. Kozlov [et al.]; under the general editorship of S.V. Pozyabin. - Moscow: Kolos-s, 2019. – 762 p.
2. Vasiliev V.K. General surgery: textbook / V.K. Vasiliev, A.P. Popov, A.D. Tsybikzhapov. - St. Petersburg : Publishing house "Lan", 2014. - 272 p.

Additional Reading:

1. Surgical methods of injury prevention: an educational and methodological manual on the disciplines "General and private surgery", "Veterinary surgery" / Yu.A. Vatnikov, V.I. Parshina, E.V. Kulikov [et al.]. - Electronic text data. - Moscow: RUDN, 2018. - 26 p.
2. Closed mechanical injuries in animals: an educational and methodological manual on the disciplines "General and private surgery", "Veterinary surgery" / Yu.A. Vatnikov, V.I. Parshina, E.V. Kulikov [et al.]. - Electronic text data. - Moscow: RUDN, 2018. - 23 p.
3. Basic methods of treatment of open mechanical injuries: an educational and methodical manual on the disciplines "General and private surgery", "Veterinary surgery" / Yu.A. Vatnikov, V.I. Parshina, E.V. Kulikov [et al.]. - Electronic text data. - Moscow: RUDN, 2018. - 21 p.

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" <http://www.biblioclub.ru>
 - ELS Yurayt <http://www.biblio-online.ru>
 - ELS "Student Consultant" www.studentlibrary.ru
 - ELS "Lan" <http://eZlanbook.com/>
 - ELS "Trinity Bridge" <http://www.trmost.com/>
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 <https://www.google.ru/>

- abstract database SCOPUS <http://www.elsevier.com/locate/SCOPUS>

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

1. A course of lectures on the discipline "**General Surgery**".
2. Laboratory workshop on the discipline "**General Surgery**".

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

8. MID-TERM ASSESSMENT

Evaluation materials and a point-rating system* for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline "**General Surgery**" 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:

Senior lecturer of the Department of Veterinary
Medicine

Position, Basic curriculum

Signature

Troshina N.I.

Full name.

HEAD OF THE DEPARTMENT:

Department of Veterinary Medicine

Name Basic Curriculum

Signature

Vatnikov Yu.A.

Full name.

HEAD OF THE HIGHER EDUCATION PROGRAM:

Director of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

Vatnikov Yu.A.

Full name