

Документ подписан простой электронной подписью
Информация о владельце:
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Должность: Ректор
Дата подписания: 09.06.2022 17:00:36
Уникальный программный ключ:
ca953a0120d891083f939673078ef1a989dae18a

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

WORKING COURSE SYLLABUS

Internal diseases

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 "**Internal diseases**" is to provide students with theoretical and practical knowledge on general disease prevention, therapeutic techniques, etiology, pathogenesis, symptoms, diagnosis, treatment and prevention of specific non-infectious diseases.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "**Internal non-infectious diseases**" 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 modern professional methodology for conducting experimental research and interpreting their results.	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.
		GPC-4.2 He knows the methods of solving problems using modern equipment.
		GPC-4.3 He is ready to use modern methodology in the development and conduct of experimental research.

		GPC-4.4 Uses modern professional methodology in interpreting research results.
GPC -5	The ability to draw up special documentation, analyze the results of professional activity and submit accounting documents using specialized databases.	GPC-5.1 Has the skills to search for the necessary forms of documentation on official websites and in specialized databases.
		GPC-5.2 Possesses professional terminology and skills in filling out analytical and reporting documents of a professional orientation.
		GPC-5.3 He is able to use specialized software to analyze the results of professional activity and compile accounting documentation.
GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	GPC-6.1 Has knowledge in the field of etiology and pathogenesis of animal diseases of different species.
		GPC-6.2 Has the skills to diagnose non-infectious, infectious and invasive diseases, identify pathogens of infectious and invasive diseases in animals.
		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.
PC -1	The ability to collect anamnesis of life and disease of animals to identify the causes of diseases and their nature.	PC -1.1 He is able to collect an anamnesis of the animal's life and reflect this in the relevant service documentation.
		PC-1.2 He is able to collect the anamnesis of the animal's disease and reflect it in the patient's medical history.
		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.
PC -3	Ability to develop animal research programs using special (instrumental) and laboratory methods.	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.

		PC-3.2 Capable of developing mass comprehensive animal research programs (medical examination programs) of 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, taking into account the form of release and the

		<p>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 -13	Ability to develop recommendations for special feeding of sick animals for therapeutic purposes.	<p>PC-13.1 He is able to justify the appointment of special feeding to an animal for therapeutic purposes in various diseases;</p> <p>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;</p> <p>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.</p>
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	<p>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.</p> <p>PC-14.2 Able to conduct a repeated clinical examination, taking into account the specifics of diseases previously diagnosed in the patient.</p>

	effectiveness of treatment.	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
		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
		PC-16.4 Take corrective measures to implement measures to prevent the occurrence of non-infectious animal diseases based on the results of control
		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
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	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
		PC-18.2 He is able to organize and conduct medical examination according to the drawn up plan
		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
PC -19	The ability to perform post-mortem diagnostic examination of animals in order to establish	PC-19.1 Able to conduct a general examination of animal corpses before autopsy.

	pathological processes, diseases, causes of death.	<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 antiepidemiological 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 epidemiological examination of the organization, territory.</p> <p>PC-20.2 He is able to develop an annual plan of antiepidemiological and antiparasitic measures, a plan for the prevention of non-infectious animal diseases, a plan of veterinary and sanitary measures.</p> <p>PC-20.3 He is able to analyze the effectiveness of measures for the prevention of animal diseases in order to improve them.</p>
PC -23	The ability to analyze the effectiveness of measures for the prevention of animal diseases in order to improve them.	<p>PC-23.1 He is capable of collecting and analyzing information, including veterinary statistics data, necessary to assess the effectiveness of preventive antiepidemiological measures, prevention of non-infectious animal diseases, veterinary and sanitary measures.</p> <p>PC-23.2 Able to evaluate the effectiveness of preventive measures and methods of their implementation, including using special software.</p> <p>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.</p>
PC -24	Ability and willingness to promote veterinary knowledge, including in the field of prevention of animal diseases.	<p>PC-24.1 He is able to set goals in the field of veterinary knowledge promotion, plan the strategy and tactics of upcoming events.</p> <p>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.</p> <p>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</p>

		animal diseases.
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3. COURSE IN HIGHER EDUCATION

The discipline "**Internal diseases**" 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 "**Internal diseases**".

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

Competence 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.	История Философия Безопасность жизнедеятельности Математика ОСНОВЫ ЭКОНОМИКИ И МЕНЕДЖМЕНТА	Obstetrics, gynecology and andrology Private Veterinary surgery General 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 Private Veterinary surgery General 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	Private Veterinary surgery General 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-	Biology with the basics of ecology Veterinary genetics Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of	Animal health and welfare Obstetrics, gynecology and andrology Private Veterinary surgery General surgery Parasitology and invasive

	<p>economic, genetic and economic factors on the physiological state of the animal organism.</p>	<p>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</p>	<p>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</p>
GPC -4	<p>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.</p>	<p>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 Clinical laboratory diagnostics</p>	<p>Clinical diagnosis Obstetrics, gynecology and andrology General surgery Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary sanitation Technology of processing livestock products Fundamentals of intellectual work Laboratory diagnostics of infectious and invasive diseases Diseases of horses Diseases of productive animals</p>

		<p>Personality psychology and professional self-determination</p> <p>Breeding with the basics of private animal husbandry</p> <p>Pathological physiology</p> <p>Medicinal and poisonous plants</p> <p>Forage plants</p> <p>Mathematics Veterinary</p> <p>Radiobiology</p> <p>Pathological anatomy</p> <p>Operative surgery with topographic anatomy</p> <p>Immunology</p>	<p>Diseases of small pets</p> <p>Diseases of small pets</p> <p>Bee diseases and entomophages</p> <p>Fish pathology and aquaculture</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</p> <p>Ophthalmology</p> <p>Animal Dentistry</p>
GPC -5	<p>The ability to draw up special documentation, analyze the results of professional activity and submit accounting documents using specialized databases.</p>	<p>Veterinary genetics</p> <p>Computer science</p> <p>Breeding with the basics of private animal husbandry</p> <p>Clinical diagnosis</p> <p>Pathological anatomy</p> <p>Instrumental diagnostic methods</p> <p>Economics and organization of agricultural production</p> <p>Clinical laboratory diagnostics</p>	<p>Operative surgery with topographic anatomy</p> <p>Obstetrics, gynecology and andrology</p> <p>Parasitology and invasive diseases</p> <p>Epizootology and infectious diseases</p> <p>Veterinary and sanitary examination</p> <p>Organization of veterinary business</p> <p>Forensic veterinary examination and autopsy of animals</p> <p>Veterinary deontology productions</p> <p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Organization of state veterinary supervision</p> <p>Veterinary and industrial laboratories with the basics of design</p> <p>Anesthesiology, intensive care and intensive care</p> <p>Dermatology</p> <p>Cardiology</p> <p>Endocrinology</p>

			Nephrology
GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	<p>Biology with the basics of ecology</p> <p>Life safety</p> <p>Instrumental diagnostic methods</p> <p>Veterinary microbiology and mycology</p> <p>Virology and biotechnology</p> <p>Animal health and welfare</p> <p>Feeding animals with the basics of feed production</p> <p>Introduction to the specialty</p> <p>Medicinal and poisonous plants</p> <p>Forage plants</p> <p>Animal Health</p> <p>General and veterinary ecology</p> <p>Veterinary Radiobiology</p> <p>Pathological anatomy</p> <p>Clinical diagnosis</p> <p>Toxicology</p>	<p>Obstetrics, gynecology and andrology</p> <p>Private Veterinary surgery</p> <p>General surgery</p> <p>Parasitology and invasive diseases</p> <p>Epizootology and infectious diseases</p> <p>Veterinary and sanitary examination</p> <p>Organization of veterinary business</p> <p>Forensic veterinary examination and autopsy of animals</p> <p>Veterinary sanitation</p> <p>Technology of processing livestock products</p> <p>Clinical laboratory diagnostics</p> <p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Organization of state veterinary supervision</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>Bee diseases and entomophages</p> <p>Fish pathology and aquaculture</p> <p>Diseases of exotic animals</p> <p>Anesthesiology, intensive care and intensive care</p> <p>Veterinary</p> <p>Ophthalmology</p> <p>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</p> <p>Physiology and ethology of animals</p> <p>Breeding with the basics of private animal husbandry</p> <p>Animal health and</p>	<p>Clinical diagnosis</p> <p>Obstetrics, gynecology and andrology</p> <p>Private Veterinary surgery</p> <p>General surgery</p> <p>Parasitology and invasive diseases</p>

		<p>welfare Feeding animals with the basics of feed production Fundamentals of rhetoric and communication Toxicology</p>	<p>Epizootology and infectious diseases 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 Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
PC -3	<p>Ability to develop animal research programs using special (instrumental) and laboratory methods.</p>	<p>Cytology, histology and embryology Life safety Pathological anatomy Toxicology Clinical laboratory diagnostics</p>	<p>Obstetrics, gynecology and andrology Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Forensic veterinary examination and autopsy of animals 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</p>

			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 laboratory diagnostics	Clinical diagnosis Obstetrics, gynecology and andrology Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases 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 basics of feed production Pathological physiology Pathological anatomy	Obstetrics, gynecology and andrology Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases Forensic veterinary examination and autopsy of animals Zoopsychology

		<p>Toxicology Clinical diagnosis</p>	<p>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>The ability to develop a treatment plan for animals 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 Private Veterinary surgery General 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 Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery</p>

			Veterinary Ophthalmology Animal Dentistry
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.	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	Obstetrics, gynecology and andrology Private Veterinary surgery General 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
PC -8	Ability to choose methods of non-drug therapy, including physiotherapy methods for the treatment of animals.	Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Feeding animals with the basics of feed production Pathological physiology Veterinary Radiobiology	Private Veterinary surgery General 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
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	Private Veterinary surgery General 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 Private Veterinary surgery General 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 genetics Life safety Physiology and ethology of animals	Animal health and welfare Obstetrics, gynecology and andrology Private Veterinary surgery

	veterinary measures aimed at the prevention of non-communicable diseases in accordance with the plan for the prevention of non-communicable animal diseases	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	General 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	The 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 Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary

			<p>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</p>
PC -20	<p>Ability to develop an annual plan of antiepidemiologic measures, a plan for the prevention of non-infectious animal diseases, a plan of veterinary and sanitary measures.</p>	<p>Veterinary microbiology and mycology of animals Feeding animals with the basics of feed production Fundamentals of Economics and Management Animal Health</p>	<p>Health and well-being Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases Organization of veterinary business Veterinary sanitation Economics and organization of agricultural production Bee diseases and entomophages Fish pathology and aquaculture</p>
PC -23	<p>The ability to analyze the effectiveness of measures for the prevention of animal diseases in order to</p>	<p>Breeding with the basics of private animal husbandry Toxicology Fundamentals of Economics and</p>	<p>Animal health and welfare Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and</p>

	improve them.	Management Animal Health	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 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	Animal health and welfare Obstetrics, gynecology and andrology Private Veterinary surgery General surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary sanitation Veterinary deontology Economics and 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

		Russian language. Professional communications General and veterinary ecology Animal Health Zoopsychology	Veterinary Ophthalmology Animal Dentistry
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4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "**Internal diseases**" is 6 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	8	-	-	
Contact academic hours		108	54	54	-	-	
including							
Lectures		36	18	18	-	-	
Lab work		72	36	36	-	-	
Seminars (workshops/tutorials)		-	-	-	-	-	
Self-study		82	74	8	-	-	
Evaluation and assessment (exam/pass/fail grading)		26	16	10	-	-	
Course workload		Academic hour	216	144	72	-	-
		Credit unit	6	4	2	-	-

*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	8	-	-	
Contact academic hours		72	36	36	-	-	
including							
Lectures		36	18	18	-	-	
Lab work		36	18	18	-	-	
Seminars (workshops/tutorials)		-	-	-	-	-	
Self-study		120	94	26	-	-	
Evaluation and assessment (exam/pass/fail grading)		24	14	10	-	-	
Course workload		Academic hour	216	144	72	-	-
		Credit unit	6	4	2	-	-

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. General therapy and prevention.	Topic 1.1. Theoretical and organizational foundations of prevention and treatment of internal non-infectious diseases.	Lectures, Lab work.
	Topic 1.2. Means and methods of therapy. Therapeutic technique.	Lectures, Lab work.
	Topic 1.3. Physiotherapy.	Lectures, Lab work.
	Topic 1.4. Medical examination.	Lectures, Lab work.
Section 2. Private therapy and prevention.	Topic 2.1. Metabolic diseases.	Lectures, Lab work.
	Topic 2.2. Diseases of the respiratory system.	Lectures, Lab work.
	Topic 2.3. Diseases of the cardiovascular system.	Lectures, Lab work.
	Topic 2.4. Diseases of the gastrointestinal tract.	Lectures, Lab work.
	Topic 2.5. Diseases of the central nervous system.	Lectures, Lab work.
	Topic 2.6. Diseases of the MVS.	Lectures, Lab work.
	Topic 2.7. Poisoning.	Lectures, Lab work.
	Topic 2.8. Diseases of young animals.	Lectures, Lab work.
	Topic 2.9. Diseases of birds.	Lectures, Lab work.
	Topic 2.10. Diseases of fur-bearing animals.	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>Information stands.</i> - <i>Instruments and devices of clinical veterinary medicine.</i>

Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	- <i>Information stands.</i> - <i>Instruments and devices of clinical veterinary medicine.</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.	-

7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main reading:

1. Usha Boris Veniaminovich. Propaedeutics of internal non-infectious animal diseases / B.V. Usha, I.M. Belyakov. - St. Petersburg : Quadro, 2020. - 474 p.
2. Guide to practical classes on internal non-infectious diseases : textbook / A.V. Yashin, G.G. Shcherbakov, N.A. Kochueva [et al.]. - St. Petersburg : Publishing House "Lan", 2016. - 176 p.

Additional Reading:

1. Clinical diagnostics of internal diseases of animals : textbook / S.P. Kovalev, A.P. Kurdeko, E.L. Bratushkina [et al.]. - 2nd ed., erased. - St. Petersburg : Publishing House "Lan", 2016. - 544 p.
2. Internal diseases of animals. For colleges : textbook / G.G. Shcherbakov, S. P. Kovalev, A.V. Yashin, S. V. Vinnikova. - 2nd ed., ispr. and add. - St. Petersburg : Publishing House "Lan", 2012. - 496 p.
3. Usha Boris Veniaminovich. Clinical diagnostics inutrennich noncompetitive aposematicx painful animal urgemx: textbook / B.V. Usha, I.M. Belyakov, R.P. Pushkarev; B.V.Usha and others. - M. Colossus, 2004. - 487 pp.
4. Kondrakhin Ivan Petrovich. Internal non-infectious diseases of animals : textbook for universities / I.P. Kondrakhin, G.A. Talanov, V.V. Pak. - M. : Koloss, 2003. - 461 p.
5. Kazeev G.V., Kazeeva A.V. Veterinary acupuncture [Electronic resource]: - 3rd ed., erased. – St. Petersburg : Publishing House "Lan", 2017. – 296 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.elsevierscience.ru/products/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 "**Internal diseases**".

2. Laboratory workshop on the discipline "**Internal diseases**".

* - 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 "**Internal diseases**" 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:

Associate Professor of the Department of Veterinary

Medicine

Position, Basic curriculum

Signature

Semenova V. 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