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

WORKING COURSE SYLLABUS

Diseases of productive animals

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 "**Diseases of productive animals**" is the development by students of theoretical, methodological and practical knowledge that forms the modern chemical basis for the development of core academic disciplines and the implementation of the main professional tasks: prevention and treatment of animal diseases, increasing the production of high-quality products and raw materials of animal origin, environmental protection from pollution, etc.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "**Diseases of productive animals**" 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)
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 -6	The ability to analyze, identify and assess the risk of the risk of	GPC-6.1 Has knowledge in the field of etiology and pathogenesis of animal

	the occurrence and spread of diseases.	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 characteristics of the administration of the drug to the patient.
		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.
		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.

PC -8	Ability to choose methods of non-drug therapy, including physiotherapy methods for the treatment of animals.	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;
		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 therapeutic, including physiotherapy procedures using special equipment in compliance with safety rules.	PC-9.1 Able to carry out therapeutic, including physiotherapy, procedures using special equipment in compliance with safety rules;
		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.
PC -10	The ability to determine the need for the use of surgical methods in the treatment of animals.	PC-10.1 Able to determine the need for the use of surgical methods in the treatment of animals;
		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;
		PC-10.3 He is able to take into account the risks and possible complications accompanying surgical interventions and take measures to prevent them.
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
		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 pathological processes, diseases, causes of death.	PC-19.1 Able to conduct a general examination of animal corpses before autopsy.
		PC-19.2 He is capable of performing autopsy of animal corpses using special tools and compliance with safety requirements.
		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.
		PC-19.4 He is able to formalize the results of a postmortem diagnostic examination of an animal in the autopsy protocol.
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 "**Diseases of productive animals**" 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 "**Diseases of productive animals**".

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)
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	Diseases of small pets Diseases of small pets Bee diseases and entomophages Fish pathology and aquaculture Diseases of exotic animals Anesthesiology,

		<p>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</p>	<p>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 Physical and colloidal chemistry Cytology, histology and embryology Biological chemistry Veterinary microbiology and mycology Virology and biotechnology</p>	<p>animals Diseases of small pets Bee diseases and entomophages Fish pathology and aquaculture Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology</p>

		<p>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 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</p>	<p>Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
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GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	Biology with the basics of ecology Life safety Veterinary microbiology and mycology Virology and biotechnology Animal health and welfare Feeding animals with the basics of feed production Veterinary 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	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
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		poisonous plants Forage plants Animal Health Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Organization of state veterinary supervision Diseases of horses	
PC -1	The ability to collect anamnesis of life and disease of animals to identify the causes of diseases and their nature.	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 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 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 -3	Ability to develop	Animal Anatomy	Diseases of small

	<p>animal research programs using special (instrumental) and laboratory methods.</p>	<p>Organic Chemistry Biological physics Physical and colloidal chemistry Biological chemistry Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology 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 Immunology Veterinary deontology Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Veterinary and industrial laboratories with the basics of design Diseases of horses</p>	<p>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 -4	<p>The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis.</p>	<p>Animal anatomy Biological physics Cytology, histology and embryology Biological chemistry Veterinary microbiology and mycology</p>	<p>Diseases of small pets Diseases of small pets Diseases of exotic animals Anesthesiology,</p>

		<p>Virology and biotechnology</p> <p>Physiology and ethology of animals</p> <p>Pathological physiology</p> <p>Clinical diagnosis</p> <p>Pathological anatomy</p> <p>Instrumental diagnostic methods</p> <p>Obstetrics, gynecology and andrology</p> <p>Internal non-infectious diseases</p> <p>General surgery</p> <p>Private Veterinary surgery</p> <p>Parasitology and invasive diseases</p> <p>Epizootology and infectious diseases</p> <p>Clinical laboratory diagnostics</p> <p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Diseases of horses</p>	<p>intensive care and intensive care</p> <p>Dermatology</p> <p>Cardiology</p> <p>Endocrinology</p> <p>Nephrology</p> <p>Veterinary</p> <p>Ophthalmology</p> <p>Animal Dentistry</p>
PC -5	<p>The ability to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods.</p>	<p>Veterinary genetics</p> <p>Cytology, histology and embryology</p> <p>Physiology and ethology of animals</p> <p>Breeding with the basics of private animal husbandry</p> <p>Feeding animals with the basics of feed production</p> <p>Pathological physiology</p> <p>Clinical diagnosis</p> <p>Pathological anatomy</p> <p>Toxicology</p> <p>Obstetrics, gynecology and andrology</p> <p>Internal non-infectious diseases</p> <p>General surgery</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>

		Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Forensic veterinary examination and autopsy of animals Zoopsychology Diseases of horses	Veterinary Ophthalmology Animal Dentistry
PC -6	The ability to develop a treatment plan for animals based on the established diagnosis and individual characteristics of animals.	Veterinary genetics Veterinary microbiology and mycology Virology and biotechnology Pathological physiology Veterinary Pharmacology Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Mathematics Immunology Zoopsychology Diseases of horses	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
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	Diseases of small pets Diseases of small pets Bee diseases and entomophages Fish pathology and aquaculture Diseases of exotic animals Anesthesiology,

		<p>Veterinary Pharmacology Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Medicinal and poisonous plants Diseases of horses</p>	<p>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 physiotherapy 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 Internal non-infectious diseases General surgery Private Veterinary surgery Diseases of horses</p>	<p>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 -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 Veterinary Radiobiology General surgery</p>	<p>Diseases of small pets Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology</p>

		Private Veterinary surgery Diseases of horses	Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
PC -10	The ability to determine the need for the use of surgical methods in the treatment of animals.	Veterinary genetics Cytology, histology and embryology Veterinary microbiology and mycology Physiology and ethology of animals Pathological physiology Clinical diagnosis Pathological anatomy Obstetrics, gynecology and andrology General surgery Private Veterinary surgery Diseases of horses	Diseases of small pets Diseases of small pets Diseases of exotic animals Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
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 Veterinary Pharmacology 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 Clinical laboratory diagnostics	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

		Diseases of horses	
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	<p>Veterinary genetics</p> <p>Life safety</p> <p>Physiology and ethology of animals</p> <p>Breeding with the basics of private animal husbandry</p> <p>Animal health and welfare</p> <p>Feeding animals with the basics of feed production</p> <p>Obstetrics, gynecology and andrology</p> <p>Internal non-infectious diseases</p> <p>General surgery</p> <p>Private Veterinary surgery</p> <p>Organization of veterinary business</p> <p>Fundamentals of Economics and Management</p> <p>Economics and organization of agricultural production</p> <p>Medicinal and poisonous plants</p> <p>Forage plants</p> <p>Zoopsychology</p> <p>Animal Health</p> <p>Diseases of horses</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>Veterinary Ophthalmology</p> <p>Animal Dentistry</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	<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 welfare</p> <p>Feeding animals with the basics of feed production</p> <p>Pathological physiology</p>	<p>Diseases of small pets</p> <p>Diseases of small pets</p> <p>Diseases of exotic animals</p> <p>Dermatology</p> <p>Cardiology</p> <p>Endocrinology</p> <p>Nephrology</p> <p>Veterinary Ophthalmology</p>

	based on the results of the examination of animals conducted as part of the medical examination	<p>Veterinary Pharmacology Clinical diagnosis Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Animal Health Clinical laboratory diagnostics Diseases of horses</p>	Animal Dentistry
PC -19	The ability to perform post-mortem diagnostic examination of animals in order to establish pathological processes, diseases, causes of death.	<p>Animal anatomy Cytology, histology and embryology Life safety Pathological anatomy 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 Forensic veterinary examination and autopsy of animals Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Diseases of horses</p>	<p>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 -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 Animal health and welfare Feeding animals with the basics of feed production Pathological physiology Pathological anatomy 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 Introduction to the specialty General and veterinary ecology Veterinary sanitation Veterinary deontology Economics and organization of agricultural production Medicinal and poisonous plants Forage plants Zoopsychology Animal Health Diseases of horses	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 Foreign language for special purposes Russian for special purposes Foreign language. Translation of special texts Russian language. Translation of special texts Foreign language. Professional communications Russian language. Professional communications
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4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "**Diseases of productive animals**" 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				
			9	-	-	-	
Contact academic hours		36	36	-	-	-	
including							
Lectures		18	18	-	-	-	
Lab work		18	18	-	-	-	
Seminars (workshops/tutorials)		-	-	-	-	-	
Self-study		60	60	-	-	-	
Evaluation and assessment (exam/pass/fail grading)		12	12	-	-	-	
Course workload		Academic hour	108	108	-	-	-
		Credit unit	3	3	-	-	-

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				
			A	-	-	-	
Contact academic hours		18	18	-	-	-	
including							
Lectures		-	-	-	-	-	
Lab work		-	-	-	-	-	
Seminars (workshops/tutorials)		18	18	-	-	-	
Self-study		80	80	-	-	-	
Evaluation and assessment (exam/pass/fail grading)		10	10	-	-	-	
Course workload		Academic hour	108	108	-	-	-
		Credit unit	3	3	-	-	-

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
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Section 1. Differential diagnosis of diseases of productive animals.	Topic 1.1. Methods of working with animal owners.	Lectures, Lab work.
	Topic 1.2. Algorithm of differential diagnosis in various diseases.	Lectures, Lab work.
	Topic 1.3. Urgent conditions and planned diagnostics.	Lectures, Lab work.
	Topic 1.4. Medical examination.	Lectures, Lab work.
Section 2. Diseases of the gastrointestinal tract.	Topic 2.1. Methods of diagnosis of chronic and urgent gastrointestinal pathologies.	Lectures, Lab work.
	Topic 2.2. Palpation, percussion and auscultation of abdominal organs.	Lectures, Lab work.
	Topic 2.3. Radiography and ultrasound examination of the abdominal cavity.	Lectures, Lab work.
	Topic 2.4. Operative and conservative treatment of patients.	Lectures, Lab work.
	Topic 2.5. Rehabilitation.	Lectures, Lab work.
Section 3. Investigation of pathologies and development of a therapeutic diet.	Topic 3.1 Methods of investigation of the patient in the pathology of the digestive glands. The coprogram.	Lectures, Lab work.
	Topic 3.2. Development of therapeutic diets.	Lectures, Lab work.
Section 4. Diseases of the urinary tract.	Topic 4.1. Algorithm of differential diagnosis of diseases of the urinary system.	Lectures, Lab work.
	Topic 4.2. Nephritis, nephrosis, nephrosclerosis, pyelonephritis.	Lectures, Lab work.
	Topic 4.3. Diseases of the urinary tract: pyelitis, urocystitis, urolithiasis.	Lectures, Lab work.
	Topic 4.4. Hematuria. Urine examination, ultrasound and X-ray diagnostics. Cystocentesis.	Lectures, Lab work.
Section 5. Pathology of the reproductive system	Topic 5.1. Differential diagnosis of diseases of the genitals.	Lectures, Lab work.
	Topic 5.2. Ultrasound and X-ray diagnostics of diseases of the genital organs.	Lectures, Lab work.
	Topic 5.3. Operative and conservative treatment.	Lectures, Lab work.
	Topic 5.4. Endometritis. The pyometer. Vulvovaginitis.	Lectures, Lab work.
	Topic 5.5. Ovarian cysts.	Lectures, Lab work.
	Topic 5.6. Prostatitis. Neoplasms of the	Lectures, Lab

	prostate.	work.
Section 6. Pathology of the respiratory tract.	Topic 6.1. Examination of the respiratory system.	Lectures, Lab work.
	Topic 6.2. Auscultation of the respiratory tract.	Lectures, Lab work.
	Topic 6.3. Chest X-ray.	Lectures, Lab work.
	Topic 6.4. Thoracocentesis.	Lectures, Lab work.
Section 7. Pathology of the cardiovascular system.	Topic 7.1. Diseases of the cardiovascular system.	Lectures, Lab work.
	Topic 7.2. Classification, syndromes.	Lectures, Lab work.
	Topic 7.3. Diseases of the heart muscle.	Lectures, Lab work.
	Topic 7.4. Endocardial diseases.	Lectures, Lab work.
	Topic 7.5. Heart defects.	Lectures, Lab work.
	Topic 7.6. Vascular diseases.	Lectures, Lab work.
Section 8. Infectious diseases of productive animals.	Topic 8.1. Methods of diagnosis and prevention.	Lectures, Lab work.
	Topic 8.2. Working out the method of admission of a patient with suspected infectious pathology.	Lectures, Lab work.
	Topic 8.3. Algorithm of differential diagnostics.	Lectures, Lab work.
	Topic 8.4. Etiotropic therapy.	Lectures, Lab work.
	Topic 8.5. Symptomatic treatment.	Lectures, Lab work.
Section 9. Endocrinological pathology. Diagnostic methods and correction.	Topic 9.1. Algorithm of differential diagnosis of endocrinological pathology.	Lectures, Lab work.
	Topic 9.2. Trichoscopy, analysis of the results of scotch tests and scrapings.	Lectures, Lab work.
	Topic 9.3. Blood and urine testing.	Lectures, Lab work.

6. CLASSROOM INFRASTRUCTURE AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the discipline

<i>Classroom for</i>	<i>Equipping the classroom</i>	<i>Specialized</i>
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<i>Academic Activity Type</i>		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.	-
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	-
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. Zhukov V.M. Organopathology of light productive animals : textbook / V.M. Zhukov, O.S. Mishina, N.M. Semenikhina. - 2nd ed., ispr. and add. - St. Petersburg : Publishing House "Lan", 2021. - 92 p. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-2496-2.
http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=464971&idb=06
2. Truflyak E. V., Kurchenko N. Yu., Tenekov A. A., Yakushev V. V., Borisenko I. B., Mashkov S. V., Lichman G. I., Daibova L. A. Precision agriculture: textbook for universities 2021.-512 p. <https://e.lanbook.com/book/151671>
3. Petryankin F. P., Petrova O. Yu. Diseases of young animals: a textbook for SPO 2022.-352 p. <https://e.lanbook.com/book/153636>

Additional Reading:

4. Akaevsky A.V., Yudichev Yu., Seleznev S.B. Anatomy of domestic animals / Edited by S.B. Seleznev / M.: Aquarium-Print LLC, 2009.- 638 p.
5. Andreevsky I. The book about diseases of horses. - - M.: Editorial URSS, 2012. - 532 p.
6. Dorosh M.V. Diseases of horses / M.: Veche, 2007. – 247 p.

7. Kerber Hans-Dieter Hoof diseases and horse forging. A desktop book for vet. doctors, kuznetsov-kovalyov and owners . - M.: Aquarium - Print, 2016. - 324 p.
8. Remy David W. Respiratory diseases of horses. - M.: Aquarium - Print, 2008. - 112 p.
9. Korneeva O. Diseases of horses Modern methods of treatment. - Moscow: Aquarium, 2007. - 1008 p.
10. Robinson, Edward N., Wilson, Matilda R. Diseases of horses. Modern methods of treatment. - M.: Aquarium - Print, 2007. - 1012 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 "**Diseases of productive animals**".
2. Laboratory workshop on the discipline "**Diseases of productive animals**".

* - 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 "**Diseases of productive animals**" 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