Federal State Autonomous Educational Institution for Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA

Agrarian and Technological Institute

WORKING COURSE SYLLABUS

Obstetrics, gynecology and andrology

Recommended by the Methodological Council for the Education Field:

36.05.01 Veterinary medicine

2022

1. GOALS AND OBJECTIVES OF THE DISCIPLINE

The aim of the mastering the discipline "**Obstetrics, gynecology and andrology**" is to acquire students of theoretical knowledge and practical skills in the field of veterinary obstetrics, gynecology, andrology and biotechnology of reproduction of agricultural and small domestic animals, providing not only a successful intensification of animal reproduction, which consists in the maximum safety of young animals, obtaining a viable offspring, as well as high quality products, but also in conducting systematic explanatory work in the circles of companion animal owners engaged in breeding.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "**Obstetrics, gynecology and andrology**" 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.
GPC-1	The ability to determine the biological status and normative clinical indicators of organs and systems of the animal body.	GPC-1.1 Knows the structure and functions of the main systems of the animal body, taking into account species characteristics
		GPC-1.2 Able to predict expected disturbances in biological status when diseases are suspected
		GPC-1.3 Is able to determine the main performance indicators of individual body systems and draw conclusions about the presence of deviations from the normative

		values
		GPC-1.4 Knows how to take samples of biological fluids and tissues for research, perform laboratory research, interpret research results.
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 Knows the influence of natural, socio-economic, genetic and economic factors on the animal bodya
		GPC-2.2 Can establish the presence and validity of cause-effect relationships between the impact of certain etiological factors on the animal body and the development of diseases
		GPC-2.3 Knows the methods of preventive and therapeutic correction of the impact of unfavorable environmental factors that can cause deterioration of animal health
GPC-4	Ability to use in professional activity methods of solving problems using modern equipment in the development of new technologies and to use modern professional methodology for conducting experimental research and interpreting their results.	GPC-4.1 Knows the conceptual and methodological apparatus of the basic natural sciences at a level sufficient for full professional activity at the modern level
		GPC-4.2 Knows how to solve problems using modern equipment
		GPC-4.3 Willing to use modern methodology in designing and conducting 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	GPC-6.1 Has knowledge in the field of

	and assess the danger of the risk of the occurrence and spread of diseases.	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 Knows the patterns of occurrence and spread of diseases in animal populations, factors predisposing to illnesses and 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 Able to compile an animal's life history and record it in appropriate service records
		PC-1.2 Able to collect an animal's medical history and reflect it in the patient's medical history
		PC-1.3 Is able to identify possible causes of disease in an animal, factors predisposing to the disease and concomitant conditions affecting the course of the disease and use this information in making a diagnosis
PC-2	The ability to conduct a general clinical study of animals in order to establish a preliminary diagnosis and determine a further research program, as well as in accordance with the plan of antiepizootic measures, the plan for the prevention of non-communicable animal diseases	PC-2.1 Able to conduct a general clinical examination of animals of different species to establish a preliminary diagnosis and determine a further research program
		PC-2.2 Able to conduct mass clinical examinations of animals in accordance with the plan of anti-epizootic activities, the plan of prevention of non-communicable diseases of animals
PC-3	Ability to develop animal research programs using special (instrumental) and laboratory methods	PC-3.1 Can develop individual programs of animal research, including the use of special (instrumental) and laboratory methods to detect deviations from the physiological norm of the state of the living organism, differential diagnosis of detected pathology or control of the course of the disease and the effectiveness of the prescribed treatment
		PC-3.2 Capable of developing mass comprehensive animal research programs (dispensary programs) for 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 perform additional examinations of animals using laboratory methods to clarify the diagnosis
		PC-4.2 Able to perform additional examinations of animals 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 Is able to diagnose different types of patients based on analysis of anamnesis, general, special (instrumental) and laboratory examination data
		PC-5.2 Is able to predict the risks of disease on the basis of anamnestic data, the results of general, special (instrumental) and laboratory tests
PC -6	The ability to develop a treatment plan for animals based on the established diagnosis and individual characteristics of animals.	PC-6.1 He is able to develop a treatment plan for animals based on the established diagnosis and individual characteristics of the 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 medicaments of chemical and biological nature for the treatment of animals, taking into account their combined pharmacological effect on the organism.	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-10	The ability to determine the need for the use of surgical and surgical methods in the treatment of animals	PC-10.1 Can determine the necessity of using operative-surgical methods in the treatment of animals
		PC-10.2 Able to choose the optimal surgical method for the patient, taking into account external conditions and the patient's body status, and if several manipulations are necessary - their order and distribution in time
		PC-10.3 Able to consider risks and possible complications accompanying surgical interventions and take measures for their prevention
PC-11	Ability to develop a plan for a surgical operation, including the choice of a method of pain relief	PC-11.1 Capable of developing a surgical plan
		PC-11.2 Is able to select and justify the best option for anesthesia of the patient during surgery and in the postoperative period
PC-12	The ability to perform surgical intervention in the body of animals in the treatment of various diseases, castration, sterilization, for cosmetic purposes	PC-12.1 Is able to prepare the room, equipment, and supplies necessary to perform a surgical procedure in an aseptic and antiseptic manner.
		PC-12.2 Is able to prepare the surgical team for surgical intervention, taking into account the requirements of asepsis and antisepsis.
		PC-12.3 Is able to prepare the patient for surgical intervention, taking into account the requirements of asepsis and antisepsis.
		PC-12.4 Able to assist the operating surgeon during surgical interventions.
		PC-12.5 Able to perform preventive and economic operations (including castration, dehorning, etc.) in farm and companion animals.
		PC-12.6 Able to independently perform

		diagnostic and therapeutic operations in animals of different species, taking into account the species, age and individual characteristics of patients.
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 for animals (if necessary) based on the results of evaluating the effectiveness of treatment	PC-14.1 Able to develop a repeat study plan necessary and sufficient to assess the predicted changes in the patient's health status
		PC-14.2 Able to perform a repeat clinical examination, taking into account the specifics of diseases previously diagnosed in the patient
		PC-14.3 Able to perform necessary repeated instrumental and laboratory tests
		PC-14.4 Is able to analyze the identified changes, evaluate the effectiveness of the ongoing treatment and, if necessary, make adjustments to the prescribed course of treatment.
PC-16	The ability to organize organizational, technical, zootechnical and veterinary activities aimed at the prevention of non-communicable diseases in accordance with the plan for the prevention of non-communicable animal diseases	PC-16.1 Capable of assessing the impact of animal housing and feeding conditions on animal health as part of the implementation of animal disease prevention plans
		PC-16.2 Is able to carry out veterinary control of the quality and procurement of animal feed to ensure their veterinary and sanitary safety as part of the implementation of plans for the prevention of animal diseases
		PC-16.3 Able to identify deviations from the plan of timing, types, quality of measures to prevent the occurrence of non-communicable animals
		PC-16.4 Take corrective measures to implement measures to prevent the occurrence of non-communicable diseases of animals based on the results of control
		PC-16.5 Conduct talks, lectures, seminars for employees of the organization to explain the principles of work on the prevention of animal diseases
PC-18	The ability to draw up a plan for clinical examination of animals, taking into account their types and purpose,	PC-18.1 Able to make a plan for the dispensary of animals, general or specialized, taking into account their species and purpose

	conduct medical examination, develop recommendations for conducting therapeutic and prophylactic and therapeutic measures based on the results of examination of animals carried out as part of medical examination	PC-18.2 Capable of organizing and conducting medical examinations according to the plan
		PC-18.3 Is able, on the basis of the results of the dispensary, to make recommendations for therapeutic and prophylactic measures aimed at improving the health of the group of animals
PC -19	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-19.1 He is able to conduct a general examination of animal corpses before autopsy
		PC-19.2 He is able to perform 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 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 readiness to promote veterinary knowledge, including in the field of animal disease prevention	PC-24.1 Able to set goals to promote veterinary knowledge, plan strategy and tactics for upcoming events
		PC-24.2 Able to use computer and telecommunication tools to prepare and display materials used in the process of promoting veterinary knowledge
		PC-24.3 Able to hold talks, lectures, seminars for employees to explain the principles of animal disease prevention

3. COURSE IN HIGHER EDUCATION

The discipline " **Obstetrics, gynecology and andrology** " 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 "**Obstetrics, gynecology and andrology**".

Table 3.1. List of Higher Education Program componentsdisciplines 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	History Philosophy Fundamentals of Economics and Management Life safety Internal non-communicable diseases	General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Organization of veterinary affairs Mathematics Veterinary deontology Space technologies at the service of the agro-industrial complex The basics of intellectual work Zoopsychology Organization of state veterinary supervision Career management Reconstructive surgery
GPC-1	The ability to determine the biological status and normative clinical indicators of organs and systems of the animal body.	Anatomy Cytology, Histology and Embryology Physiology and ethology of animals Pathological physiology Pathological anatomy and forensic veterinary examination Clinical diagnostics Instrumental diagnostic methods	Coursework "Animal Anatomy" Immunology Diseases of bees and fish Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Veterinary and industrial laboratories with design basics Biometrics Anesthesiology, resuscitation and intensive care
GPC-2	The ability to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on	Biology with the basics of ecology Veterinary genetics Veterinary Microbiology and Mycology	Internal non-communicable diseases General and private surgery Parasitology and

	the physiological state of the animal organism.	Virology and biotechnology Physiology and ethology of animals Breeding with the basics of private animal husbandry Hygiene of animals Feeding with the basics of forage production Pathological physiology Pathological anatomy and forensic veterinary examination Veterinary radiobiology Instrumental diagnostic methods Toxicology	invasive diseases Epizootology and infectious diseases Forensic veterinary medicine and animal necropsy Immunology General and Veterinary Ecology Veterinary sanitation Diseases of bees and fish Fodder plants Zoopsychology Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care
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 Physical and colloidal chemistry Biological chemistry Biological physics Computer science Cytology, Histology and Embryology Veterinary Microbiology and Mycology Virology and biotechnology Physiology and ethology of animals Breeding with the basics of private animal husbandry Pathological physiology Pathological	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Mathematics Immunology Veterinary sanitation Processing technology for livestock products Diseases of bees and fish Space technologies at the service of the agro-industrial complex Visual storytelling: from simple ideas to multimedia projects Medicinal and poisonous plants

		anatomy and forensic veterinary examination Veterinary radiobiology Clinical diagnostics Operative surgery with topographic anatomy Instrumental diagnostic methods Toxicology	Fodder plants The basics of intellectual work Personality psychology and professional self-determination Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Biometrics Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Animal disease therapy Anesthesiology, resuscitation and intensive care Reconstructive surgery
GPC-5	Ability to draw up special documentation, analyze the results of professional activities and submit reporting documents using specialized databases.	Veterinary genetics Computer science Economics and organization of agricultural production Breeding with the basics of private animal husbandry Pathological anatomy and forensic veterinary examination Clinical diagnostics Operative surgery with topographic anatomy Instrumental diagnostic methods	Internal non-communicable diseases Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Organization of veterinary affairs Forensic veterinary medicine and animal necropsy Veterinary deontology Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Organization of state veterinary supervision

			Veterinary and industrial laboratories with design basics Biometrics Anesthesiology, resuscitation and intensive care
GPC-6	The ability to analyze, identify and assess the risk of the risk of occurrence and spread of diseases.	Biology with the basics of ecology Life safety Veterinary Microbiology and Mycology Virology and biotechnology Hygiene of animals Feeding animals with the basics of forage production Pathological anatomy and forensic veterinary examination Veterinary radiobiology Clinical diagnostics Instrumental diagnostic methods Toxicology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Organization of veterinary affairs Forensic veterinary medicine and animal necropsy Introduction to the specialty General and Veterinary Ecology Veterinary sanitation Processing technology for livestock products Diseases of bees and fish Space technologies at the service of the agro-industrial complex Medicinal and poisonous plants Fodder plants Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Organization of state veterinary supervision Horse diseases Diseases of Productive Animals

			Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care
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 Hygiene of animals Feeding animals with the basics of forage production Clinical diagnostics Toxicology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Fundamentals of Rhetoric and Communication Veterinary deontology Zoopsychology Personality psychology and professional self-determination Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care Reconstructive surgery
PC-2	The ability to conduct a general clinical study of animals in order to establish a preliminary diagnosis and determine a further research program, as well as in accordance with the plan of antiepizootic measures, the plan for the prevention of non-communicable animal	Anatomy Physiology and ethology of animals Pathological physiology Pathological anatomy and forensic veterinary examination Clinical diagnostics	Diseases of bees and fish Anesthesiology, resuscitation and intensive care

	diseases		
PC-3	Ability to develop animal research programs using special (instrumental) and laboratory methods	Anatomy Organic chemistry Physical and Colloidal Chemistry Biological chemistry Biological physics Veterinary Microbiology and Mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology Pathological anatomy and forensic veterinary examination Clinical diagnostics Instrumental diagnostic methods Toxicology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Immunology Veterinary deontology Diseases of bees and fish Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Veterinary and industrial laboratories with design basics Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care Reconstructive surgery
PC-4	The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis	Anatomy Biological chemistry Biological physics Cytology, Histology and Embryology Veterinary Microbiology and Mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Coursework "Animal Anatomy" Clinical laboratory diagnostics Laboratory diagnostics of infectious and

		Pathological anatomy and forensic veterinary examination Clinical diagnostics Instrumental diagnostic methods	invasive diseases Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care
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 forage production Pathological physiology Pathological anatomy and forensic veterinary examination Clinical diagnostics Toxicology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Forensic veterinary medicine and animal necropsy Diseases of bees and fish Zoopsychology Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care Reconstructive surgery
PC-6	The ability to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods	Veterinary genetics Veterinary Microbiology and Mycology Virology and biotechnology Pathological physiology Veterinary pharmacology Toxicology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Mathematics Immunology

			Diseases of bees and fish Zoopsychology Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Animal disease therapy Anesthesiology, resuscitation and intensive care Reconstructive surgery
PC-7	The ability to select the necessary medicinal products of a 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	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Diseases of bees and fish Medicinal and poisonous plants Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Animal disease therapy Anesthesiology, resuscitation and intensive care
PC-10	The ability to determine the need for the use of surgical and surgical methods in the treatment of animals	Veterinary genetics Cytology, Histology and Embryology Veterinary Microbiology and Mycology Physiology and	General and private surgery Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets

		ethology of animals Pathological physiology Pathological anatomy and forensic veterinary examination Clinical diagnostics	Ophthalmology Dentistry Reconstructive surgery
PC-11	Ability to develop a plan for a surgical operation, including the choice of a method of pain relief	Anatomy Veterinary Microbiology and Mycology Physiology and ethology of animals Pathological physiology Pathological anatomy and forensic veterinary examination Veterinary pharmacology Operative surgery with topographic anatomy	General and private surgery Coursework "Animal Anatomy" Anesthesiology, resuscitation and intensive care Reconstructive surgery
PC-12	The ability to perform surgical intervention in the body of animals in the treatment of various diseases, castration, sterilization, for cosmetic purposes	Anatomy Veterinary Microbiology and Mycology Pathological anatomy and forensic veterinary examination Operative surgery with topographic anatomy	Coursework "Animal Anatomy" Reconstructive surgery
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 for animals (if necessary) based on the results of evaluating the effectiveness of treatment	Cytology, Histology and Embryology Physiology and ethology of animals Pathological physiology Pathological anatomy and forensic veterinary examination Veterinary pharmacology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Clinical laboratory diagnostics Horse diseases

		Clinical diagnostics Instrumental diagnostic methods Toxicology	Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Anesthesiology, resuscitation and intensive care Reconstructive surgery
PC-16	The ability to organize organizational, technical, zootechnical and veterinary activities aimed at the prevention of non-communicable diseases in accordance with the plan for the prevention of non-communicable animal diseases	Veterinary genetics Fundamentals of Economics and Management Economics and organization of agricultural production Life safety Physiology and ethology of animals Breeding with the basics of private animal husbandry Hygiene of animals Feeding animals with the basics of forage production	Internal non-communicable diseases General and private surgery Organization of veterinary affairs Diseases of bees and fish Medicinal and poisonous plants Fodder plants Zoopsychology Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry
PC-18	The ability to draw up a plan for clinical examination of animals, taking into account their types and purpose, conduct medical examination, develop recommendations for conducting therapeutic and prophylactic and therapeutic measures based on the results of examination of animals carried out as part of medical examinatio006E	Veterinary genetics Physiology and ethology of animals Breeding with the basics of private animal husbandry Hygiene of animals Feeding animals with the basics of forage production Pathological physiology Pathological anatomy and forensic veterinary examination Veterinary pharmacology	Internal non-communicable diseases General and private surgery Clinical laboratory diagnostics Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry

		Clinical diagnostics Instrumental diagnostic methods Toxicology	
PC-19	The ability to perform postmortem diagnostic examination of animals in order to establish pathological processes, diseases, causes of death	Anatomy Cytology, Histology and Embryology Life safety Pathological anatomy and forensic veterinary examination Toxicology	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Forensic veterinary medicine and animal necropsy Coursework "Animal Anatomy" Diseases of bees and fish Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry
PC-24	Ability and readiness to promote veterinary knowledge, including in the field of animal disease prevention	Economics and organization of agricultural production Physiology and ethology of animals Breeding with the basics of private animal husbandry Hygiene of animals Feeding animals with the basics of forage production Pathological	Internal non-communicable diseases General and private surgery Parasitology and invasive diseases Epizootology and infectious diseases Fundamentals of Rhetoric and Communication Introduction to the specialty

		physiology Pathological anatomy and forensic veterinary examination Toxicology	General and Veterinary Ecology Veterinary sanitation Veterinary deontology Diseases of bees and fish Medicinal and poisonous plants Fodder plants Zoopsychology Horse diseases Diseases of Productive Animals Diseases of small pets Diseases of small pets Ophthalmology Dentistry Foreign language for special purposes Russian language for special purposes Communicative workshop Reconstructive surgery

4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "**Obstetrics, gynecology and andrology**" is 8 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		144	72	72	-	-
including						
Lectures		72	36	36	-	-
Lab work		72	36	36	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		116	58	58	-	-
Evaluation and assessment (exam/pass/fail grading)		28	14	14	-	-
Course workload	Academic hour	**288**	**144**	**144**	**-**	**-**
	Credit	**8**	**4**	**4**	**-**	**-**

	unit					

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

Types of academic activities		HOURS	Semesters			
			7	**8**	**-**	**-**
Contact academic hours		54	36	18	-	-
including						
Lectures		18	18	-	-	-
Lab work		36	18	18	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		200	92	108	-	-
Evaluation and assessment (exam/pass/fail grading)		34	16	18	-	-
Course workload	Academic hour	**288**	**144**	**144**	**-**	**-**
	Credit unit	**8**	**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. Gynecology and Andrology.	Topic 1.1 Introduction. Reproduction physiology. Ovogenesis. Spermiogenesis.	Lectures, Lab work
	Topic 1.2 The sexual cycle.	Lectures, Lab work
	Topic 1.3 Neurohumoral regulation of the sexual cycle.	Lectures, Lab work
	Topic 1.4 Physiology of the breast.	Lectures, Lab work
	Topic 1.5 Fertilization.	Lectures, Lab work
	Topic 1.6 Transplantation of zygotes.	Lectures, Lab work
	Topic 1.7 Functional impairment of the ovaries.	Lectures, Lab work
Section 2. Obstetrics.	Topic 2.1 Organization of artificial insemination.	Lectures, Lab work
	Topic 2.2 Physiology of pregnancy.	Lectures, Lab

		work
	Topic 2.3 Physiology of childbirth.	Lectures, Lab work
	Topic 2.4 Pathology of childbirth.	Lectures, Lab work
	Topic 2.5 Delivery operations.	
	Topic 2.6 Pathology of the postpartum period.	Lectures, Lab work
	Topic 2.7 Postpartum uterine inflammation.	Lectures, Lab work
	Topic 2.8 Mammary pathology.	Lectures, Lab work

6. CLASSROOM INFRASTRUCTURE AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the discipline

Classroom for Academic Activity Type	***Equipping the classroom***	**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.	-
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. Medicines used in veterinary obstetrics, gynecology, andrology and animal reproduction biotechnology : Textbook / G.P. Dulger [et al.] - 1st ed. - SPb. : Lan', 2021. - 272 c. https://e.lanbook.com/book/75510
2. Polyantsev N. I. Workshop on obstetrics, gynecology and biotechnology of animal reproduction : textbook / N. I. Polyantsev. - SPb. Lan', 2022. - 272 c. https://e.lanbook.com/book/71726
3. Practicum on Obstetrics and Gynecology : Textbook / M. A. Bagmanov [et al.]. - SPb. : Lan', 2018. - 308 p. https://e.lanbook.com/book/92627

Additional Reading:

1. Gruzdev K.N. Rabies of animals: monograph / K.N. Gruzdev, A.E. Metlin. - Vladimir: FGBI "VNIIZH", 2019. - 393 p.: ill. - 978-5-900026-73-2:.
2. Nekrasov Gennady Davydovich. Obstetrics, gynecology and biotechnology of animal reproduction : textbook for universities / G.D. Nekrasov, I.A. Sumanova. - Moscow : Forum, 2009. - 176 c. - ISBN 978-5-91134-202-9
3. Obstetrics, gynecology and biotechnology of animal reproduction [text] : textbook for universities / Edited by V.Y. Nikitin, M.G. Mirolyubov. - M. : KolosS, 2005. - 718 c. : ill. - (Textbooks and tutorials for students of higher education institutions). - ISBN 5-9532-0193-1

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://e.lanbook.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 "**Obstetrics, gynecology and andrology**".
2. Laboratory workshop on the discipline "**Obstetrics, gynecology and andrology**".

* - 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 " **Obstetrics, gynecology and andrology** " 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.

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