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# WORKING COURSE SYLLABUS

# **Breeding with the basics of private animal husbandry**

**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 "**Breeding with the basics of private animal husbandry**" is the formation of theoretical and practical knowledge on the breeding of farm animals (the basics of breeding work) and the study of technology for obtaining products from various types of farm animals.

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

The development of the discipline "**Breeding with the basics of private animal husbandry**" 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	GPC-2.1 Has knowledge of the influence of natural, socio-economic, genetic and economic factors on the animal body.
	economic factors on the physiological state of the animal organism.	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-3	The ability to carry out and improve professional activities in accordance with regulatory legal acts in the field of agro- industrial complex.	GPC-3.1 He knows modern legal norms, both state and international, regulating activities in the field of veterinary medicine, veterinary and sanitary expertise and agro-industrial complex.
		GPC-3.2 Has the skills of updating legal information, including in the field of agro- industrial complex of professional orientation. GPC-3.3 Carries out activities in
		the field of agriculture, as well as in the field of veterinary medicine and veterinary and sanitary expertise.

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.	<ul> <li>GPC-4.1 Possesses the conceptual and methodological apparatus of basic natural sciences at a level sufficient for full fledged professional activity at the modern level.</li> <li>GPC-4.2 He knows the methods of solving problems using modern equipment.</li> <li>GPC-4.3 He is ready to use modern methodology in the development and conduct of experimental research.</li> </ul>	
		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	GPC-5.1 Has the skills to search for the necessary forms of documentation on official websites and in specialized databases.	
	documents using 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.	
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 -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 -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	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
	prevention of non- communicable animal diseases	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	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
	conduct medical examinations, to develop recommendations for carrying out preventive and	PC-18.2 He is able to organize and conduct medical examination according to the drawn up plan
	curative measures based on the results of the examination of animals conducted as part of the medical examination	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 -23	The ability to analyze the effectiveness of measures for the prevention of animal diseases in order to improve	PC-23.1 He is capable of collecting and analyzing information, including veterinary statistics data, necessary to assess the effectiveness of preventive

	them.	antiepizootic measures, prevention of non-infectious animal diseases, veterinary and sanitary measures.
	PC-23.2 Able to evaluate effectiveness of preventive measu methods of their impleme including using special software.	
		PC -23.3 He is able to make suggestions on the correction of measures for the prevention of animal diseases on the basis of the analysis carried out.
PC -24	Ability and willingness to promote veterinary knowledge, including in the field of prevention of animal diseases.	PC-24.1 He is able to set goals in the field of veterinary knowledge promotion, plan the strategy and tactics of upcoming events.
		PC-24.2 He is able to use computer and telecommunication facilities for the preparation and demonstration of materials used in the process of promoting veterinary knowledge.
		PC-24.3 He is able to conduct conversations, lectures, seminars for employees of the organization in order to explain the principles of work on the prevention of animal diseases.

## **3. COURSE IN HIGHER EDUCATION**

The discipline "**Breeding with the basics of private animal husbandry**" 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 "Breeding with the basics of private animal husbandry".

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

Competence	Competence	Previous	Subsequent
code	_	Disciplines	Disciplines (Modules)
		(Modules)	
GPC -2	The ability to interpret	Biology with the	Animal health and
	and evaluate in	basics of ecology	welfare
	professional activity the	Veterinary genetics	Pathological
	influence of natural,	Veterinary	physiology
	socio-economic, genetic	microbiology and	Veterinary

	and economic factors on	mvcology	Radiobiology
	the physiological state of	Virology and	Pathological anatomy
	the animal organism.	biotechnology	Instrumental
		Physiology and	diagnostic methods
		ethology of animals	Toxicology
			Obstetrics gynecology
			and andrology
			Internal non-infectious
			diseases
			General surgery
			Drivota Vatarinory
			surgery
			Surgery Deresiteleasy and
			investive diseases
			Emizantelo gy and
			infactious discosos
			Energie veteringery
			Forensic veterinary
			examination and
			autopsy of animals
			Immunology
			General and veterinary
			ecology
			Veterinary sanitation
			Forage plants
			Zoopsychology
			Animal Health
			Diseases of horses
			Diseases of productive
			animals
			Diseases of small pets
			Diseases of small pets
			Bee diseases and
			entomophages
			Fish pathology and
			aquaculture
			Diseases of exotic
			animals
			Anesthesiology,
			intensive care and
			intensive care
			Dermatology
			Cardiology
			Endocrinology
			Nephrology
			Veterinary
			Ophthalmology
			Animal Dentistry
GPC -3	The ability to carry out	Jurisprudence	Veterinary

	and improve professional	Life safety	Pharmacology
	activities in accordance	·	Toxicology
	with regulatory legal acts		Parasitology and
	in the field of agro-		invasive diseases
	industrial complex.		Epizootology and
	1		infectious diseases
			Organization of
			veterinary business
			General and veterinary
			ecology
			Veterinary sanitation
			Technology of
			processing livestock
			products
			Veterinary deontology
			Economics and
			organization of
			agricultural production
			Laboratory diagnostics
			of infectious and
			invasive diseases
			Organization of state
			veterinary supervision
			Veterinary and
			industrial laboratories
			with the basics of
			design
			Career Management
			Fundamentals of social
			and legal knowledge
GPC -4	The ability to use	Inorganic and	Pathological
	methods of solving	analytical chemistry	physiology
	problems using modern	Organic Chemistry	Veterinary
	equipment in the	Biological physics	Radiobiology
	development of new	Computer science	Clinical diagnosis
	technologies in	Physical and	Pathological anatomy
	professional activity and	colloidal chemistry	Operative surgery with
	to use modern	Cytology, histology	topographic anatomy
	professional methodology	and embryology	Instrumental
	for conducting	Biological	diagnostic methods
	experimental research and	chemistry	Toxicology
	interpreting their results.	Veterinary	Obstetrics, gynecology
		microbiology and	and andrology
		mycology	Internal non-infectious
		Virology and	diseases
		biotechnology	General surgery
		Physiology and	Private Veterinary
		ethology of animals	surgery

			Parasitology and
			invasive diseases
			Epizootology and
			infectious diseases
			Mathematics
			Immunology
			Veterinary sanitation
			Technology of
			processing livestock
			products
			Modicinal and
			noisonous plants
			Forego plants
			Forage plants
			Fundamentals of
			Intellectual work
			Personality
			psychology and
			professional self-
			determination
			Clinical laboratory
			diagnostics
			Laboratory diagnostics
			of infectious and
			invasive diseases
			Diseases of horses
			Diseases of productive
			animals
			Diseases of small pets
			Diseases of small pets
			Bee diseases and
			entomophages
			Fish pathology and
			aquaculture
			Diseases of exotic
			animals
			Anesthesiology,
			intensive care and
			intensive care
			Dermatology
			Cardiology
			Endocrinology
			Nephrology
			Reconstructive and
			reconstructive surgerv
			Veterinary
			Ophthalmology
			Animal Dentistry
GPC -5	The ability to draw up	Veterinary genetics	Clinical diagnosis
510-5	ine admity to draw up	, cloring genetics	

	special documentation,	Computer science	Pathological anatomy
	analyze the results of	I	Operative surgery with
	professional activity and		topographic anatomy
	submit accounting		Instrumental
	documents using		diagnostic methods
	specialized databases.		Obstetrics, gynecology
			and andrology
			Internal non-infectious
			diseases
			Parasitology and
			invasive diseases
			Enizootology and
			infectious diseases
			Veterinary and
			sanitary examination
			Organization of
			veterinary business
			Forensic veterinary
			examination and
			autopsy of animals
			Veterinary deontology
			Economics and
			organization of
			agricultural production
			Clinical laboratory
			diagnostics
			Laboratory diagnostics
			of infectious and
			invasive diseases
			Organization of state
			veterinary supervision
			Veterinary and
			industrial laboratories
			with the basics of
			design
			Anesthesiology
			intensive care and
			intensive care
			Dermatology
			Cardiology
			Endocrinology
			Nephrology
PC -1	The ability to collect	Veterinary genetics	Animal health and
1 0 -1	anamnesis of life and	Physiology and	welfare
	disease of animals to	ethology of animals	Feeding animals with
	identify the causes of	since by or uninnuib	the basics of feed
	diseases and their nature		production
			Clinical diagnosis
	l		

			Toxicology
			Obstatrics gynacology
			obstetries, 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
			Veteringry deontology
			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
			Cardialagy
			Endoaringlogy
			Nashashasa
			Nephrology
			Reconstructive and
			reconstructive surgery
			Veterinary
			Ophthalmology
			Animal Dentistry
PC -5	The ability to make a	Veterinary genetics	Feeding animals with
	diagnosis based on the	Cytology, histology	the basics of feed
	analysis of anamnesis	and embryology	production
	data, general, special	Physiology and	Pathological
	(instrumental) and	ethology of animals	physiology
	laboratory research		Clinical diagnosis
	methods		Pathological anatomy
		l	

			Toxicology
			Obstetrics gynecology
			and andrology
			Internal non-infectious
			disenses
			General surgery
			Deficial Surgery
			Private veterinary
			surgery
			Parasitology and
			invasive diseases
			Epizootology and
			infectious diseases
			Forensic veterinary
			examination and
			autopsy of animals
			Zoopsychology
			Diseases of horses
			Diseases of productive
			animals
			Diseases of small pets
			Diseases of small pets
			Bee diseases and
			entomophages
			Fish pathology and
			aquaculture
			Diseases of exotic
			animals
			Anesthesiology
			intensive care and
			intensive care
			Dermatology
			Cardiology
			Endocrinology
			Naphrology
			Reconstructive and
			reconstructive surgery
			Veterinory
			v cicillial y Ophthalmalagy
			A nine al Dantistra
	Ability to survey	Votoninana activ	Ammal Denustry
PC -16	Addition to organize	v elementary genetics	Animal nealth and
	organizational, technical,	Life safety	wellare
	zootecnnical and	Physiology and	recome animals with
	veterinary measures	ethology of animals	the basics of feed
	aimed at the prevention of		production
	non-communicable		Obstetrics, gynecology
	diseases in accordance		and andrology
	with the plan for the		Internal non-infectious
	prevention of non-		diseases

	communicable animal		General surgery
	diseases		Private Veterinary
			surgerv
			Organization of
			veterinary business
			Fundamentals of
			Economics and
			Management
			Feanomics and
			argonization of
			organization of
			Medicinal and
			poisonous plants
			Forage plants
			Zoopsychology
			Animal Health
			Diseases of horses
			Diseases of productive
			animals
			Diseases of small pets
			Diseases of small pets
			Bee diseases and
			entomophages
			Fish pathology and
			aquaculture
			Diseases of exotic
			animals
			Veterinary
			Ophthalmology
			Animal Dentistry
PC -18	The ability to draw up a	Veterinary genetics	Animal health and
	plan for the medical	Physiology and	welfare
	examination of animals,	ethology of animals	Feeding animals with
	taking into account their		the basics of feed
	types and purpose, to		production
	conduct medical		Pathological
	examinations, to develop		physiology
	recommendations for		Veterinary
	carrying out preventive		Pharmacology
	and curative measures		Clinical diagnosis
	based on the results of the		Pathological anatomy
	examination of animals		Instrumental
	conducted as part of the		diagnostic methods
	medical examination		Toxicology
			Obstetrics, gynecology
			and andrology
			Internal non-infectious
			diseases

			General surgery
			Drivete Veterinery
			Filvate veterinary
			surgery
			Animal Health
			Clinical laboratory
			diagnostics
			Diseases of horses
			Diseases of productive
			animals
			Diseases of small nets
			Diseases of small pets
			Diseases of small pets
			Diseases of exotic
			animals
			Dermatology
			Cardiology
			Endocrinology
			Nephrology
			Veterinary
			Ophthalmology
			Animal Dentistry
PC -23	Ability to analyze the	_	Animal health and
1 C -23	effectiveness of measures		welfore
	for the provention of		Taviaalagu
			Internal man infrations
	animal diseases in order		Internal non-infectious
	to improve them		diseases
			General surgery
			Private Veterinary
			surgery
			Parasitology and
			invasive diseases
			Epizootology and
			infectious diseases
			Veterinary and
			sanitary examination
			Organization of
			Votering my huginges
			vetermary business
			Forensic veterinary
			examination and
			autopsy of animals
			Fundamentals of
			Economics and
			Management
			Veterinary sanitation
			Economics and
			organization of
			agricultural production
			Animal Health
			Organization of state
			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	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 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 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

# 4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "Breeding with the basics of private animal husbandry" is 7 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		Seme	esters	
Types of academic activities		3	4	-	-
Contact academic hours	108	54	54	-	-
including					
Lectures	36	18	18	-	-
Lab work	72	36	36	-	-
Seminars (workshops/tutorials)	-	-	-	-	-
Self-study	124	116	8	-	-
Evaluation and assessment (exam/pass/fail	20	10	10	-	-

grading)						
	Academic hour	252	180	72	-	-
Course workload	Credit unit	7	5	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		Seme	esters	
			4	5	-	-
Contact academic hours		72	36	36	-	-
including						
Lectures		36	18	18	-	-
Lab work		36	18	18	-	I
Seminars (workshops/tutorials)		-	-	-	-	I
Self-study		146	58	88	-	I
Evaluation and assessment (exa	am/pass/fail	34	14	20	-	-
grading)						
	Academic	252	108	144	-	-
Course workload hour						
Course workidau	Credit	7	3	4	-	-
	unit					

# **5. CONTENT OF THE DISCIPLINE**

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

Name of the discipline	Content of the section (topics)	Types of
section		academic
		activities
Section 1. Introduction	Topic 1.1. The origin of animals,	Lectures, Lab
	breeds and their breeding.	work.
Section 2. The origin of	Topic 2.1. The concept of wild,	Lectures, Lab
animal species.	domestic, agricultural and domesticated	work.
	animals.	
Section 3. Animal breeds.	Topic 3.1. Properties, structure and	Lectures, Lab
	composition of rocks.	work.
	Topic 3.2. Factors causing the	Lectures, Lab
	formation and variability in animals.	work.
	Topic 3.3. Acclimatization.	Lectures, Lab
		work.
Section 4. Constitution,	Topic 4.1. Basic principles of	Lectures, Lab
exterior, interior.	classification of types of constitution.	work.
	The connection of the constitution with	
	various manifestations of the vital	
	activity of the organism.	

	Topic 4.2. Methods of studying the	Lectures, Lab
	exterior, interior. The use of interior	work.
	indicators in breeding.	
Section 5. Individual	Topic 5.1. Concepts of growth and	Lectures, Lab
development of animals.	development. Patterns of ontogenesis.	work.
-	Topic 5.2. Embryonic and	Lectures, Lab
	postembryonic development. Factors	work.
	affecting growth and development.	
	Control of the growth and development	
	of animals.	
Section 6. Productivity of	Topic 6.1. Evaluation of animals by	Lectures, Lab
animals.	productivity. Factors affecting	work.
	productivity (heredity, environment,	
	reproductive abilities, suitability for	
	industrial technology).	
	Topic 6.2. Principles of assessing the	Lectures, Lab
	productivity of different animal species.	work.
	Assessment of own productivity.	
Section 7. Selection,	Topic 7.1. The essence and signs of	Lectures, Lab
forms and methods of	selection. Conditions affecting the	work.
selection.	effectiveness of selection.	
	Topic 7.2. Genetic basis of selection.	Lectures, Lab
	Forms of selection. Selection by origin.	work.
	Tonic 7.3 Pedigrees Selection by the	Lasturas Lab
	Tople 7.5. Teargrees. Beleenon by the	Lectures, Lab
	quality of offspring.	work.
Section 8. Selection of	quality of offspring. Topic 8.1. The concept, forms and	work. Lectures, Lab
Section 8. Selection of farm animals.	quality of offspring.Topic 8.1. The concept, forms and methods of selection. Selection and	Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals.	quality of offspring.Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.	Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals.	<ul> <li>quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility</li> </ul>	Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals.	quality of offspring.Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.Selection according to the compatibility of genotypes.	Work. Lectures, Lab work.
Section 8. Selection of farm animals.	quality of offspring.Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.Selection according to the compatibility of genotypes.Topic 8.2. Heterosis: concept, theories,	Lectures, Lab work. Lectures, Lab work. Lectures, Lab
Section 8. Selection of farm animals.	<ul> <li>quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals.	<ul> <li>quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals.	<ul> <li>quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals.	<ul> <li>quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals.	<ul> <li>quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding).</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals.	<ul> <li>ropic 7.5. Fourgrees. Selection by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals.	<ul> <li>Topic 7.5. Fedgrees. Berection by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
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Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals. Section 10. Selection and breeding work in animal	<ul> <li>Topic 7.5.1 realigees. Berection by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> <li>Topic 10.1. Production of products in the conditions of specialization.</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals. Section 10. Selection and breeding work in animal husbandry.	<ul> <li>Topic 7.5. Fedgrees. Beletion by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> <li>Topic 10.1. Production of products in the conditions of specialization, concentration of production. Selection</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals. Section 10. Selection and breeding work in animal husbandry.	<ul> <li>Topic 7.5.1 realgrees. Berection by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> <li>Topic 10.1. Production of products in the conditions of specialization, concentration of production. Selection of the herd.</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals. Section 10. Selection and breeding work in animal husbandry.	<ul> <li>Topic 7.5. Fedgrees. Berection by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> <li>Topic 10.1. Production of products in the conditions of specialization, concentration of production. Selection of the herd.</li> <li>Topic 10.2. The relationship of</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals. Section 10. Selection and breeding work in animal husbandry.	<ul> <li>Topic 7.5. Fourgrees. Berection by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> <li>Topic 10.1. Production of products in the conditions of specialization, concentration of production. Selection of breeds, acquisition of the herd.</li> <li>Topic 10.2. The relationship of breeding and commercial animal</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.
Section 8. Selection of farm animals. Section 9. Methods of breeding farm animals. Section 10. Selection and breeding work in animal husbandry.	<ul> <li>Topic 7.5. Fedgrees. Beletion by the quality of offspring.</li> <li>Topic 8.1. The concept, forms and methods of selection. Selection and selection is the basis of selection.</li> <li>Selection according to the compatibility of genotypes.</li> <li>Topic 8.2. Heterosis: concept, theories, selection for heterosis. Importance in animal husbandry.</li> <li>Topic 9.1. Purebred breeding. Breeding by lines and families</li> <li>Topic 9.2. Related mating (inbreeding). Interbreeding. Hybridization.</li> <li>Topic 10.1. Production of products in the conditions of specialization, concentration of production. Selection of breeds, acquisition of the herd.</li> <li>Topic 10.2. The relationship of breeding and commercial animal husbandry. Planning of breeding work</li> </ul>	Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work. Lectures, Lab work.

	Topic 10.3. Large-scale breeding.	Lectures, Lab work.
Section 11. Cattle breeding.	Topic 11.1. Systems and methods of keeping cattle at different times of the year.	Lectures, Lab work.
	Topic 11.2. Reproduction of cattle. Reproductive and sexual cycles of a cow. The choice of animals in the state of hunting. Breeding and calving techniques.	Lectures, Lab work.
	Topic 11.3. Rearing of young animals. Cultivation of repair young animals.	Lectures, Lab work.
Section 12. Pig breeding.	Topic 12.1. Specialization and types of pig farms. Methods of keeping in relation to sex, age and technological groups of pigs.	Lectures, Lab work.
	Topic 12.2. Reproduction of pigs. Reproductive and sexual cycle of queens. Selection of animals that are in a state of hunting. Planning of farrowing. Preparation of animals for farrowing and its implementation.	Lectures, Lab work.
	Topic 12.3. Raising suckling pigs, piglets from weaning to fattening. Selection and introduction of repair young animals into the herd.	Lectures, Lab work.
Section 13. Sheep breeding.	Topic 13.1. Features of reproduction. Lambing season.	Lectures, Lab work.
	Topic 13.2. Reproduction of sheep. Methods of rearing young animals. Organization of weaning.	Lectures, Lab work.
	Topic 13.3. Formation of otar. Keeping sheep in summer and winter. Fattening, feeding sheep, organization of shearing.	Lectures, Lab work.
Section 14. Horse breeding.	Topic 14.1. Working qualities and their use.	Lectures, Lab work.
	Topic 14.2. Productive horse breeding. Reproduction, cultivation, maintenance of horses.	Lectures, Lab work.
Section 15. Poultry farming.	Topic 15.1. Cultivation systems and methods of maintenance.	Lectures, Lab work.

Topic 15.2. Acquisition, maintenance, maintenance of the parent herd in egg production.	Lectures, Lab work.
Topic 15.3. Egg incubation. Cultivation of repair young animals. Production of broiler meat.	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.	- Information stands. - Zoological models.
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	- Information stands. - Zoological models.
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:

- Tunikov G.M. Animal breeding with the basics of private zootechny [Electronic resource] : Textbook / G.M. Tunikov, A.A. Korovushkin. 3rd ed., erased. St. Petersburg : Publishing House "Lan", 2017. 744 p. (Textbooks for universities. Special literature).- ISBN 978-5-8114-1850-3.
  - http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=465012&idb=0
- Usmanova E.N., Buzmakova E.D., Kovrov A.V. Breeding of animals with the basics of private animal science: A textbook for laboratory and practical classes and independent work of students in the specialty 36.05.01 "Veterinary Medicine" 2018.-177p. https://e.lanbook.com/book/129597

Additional Reading:

 Polyantsev N.I. Technology of reproduction of breeding cattle [Electronic resource] : Textbook / N.I. Polyantsev. - 2nd ed., ispr. - St. Petersburg : Publishing House "Lan", 2014. - 288 p. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-1703-2.

http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=465156&idb=0

- Animal breeding [Electronic resource] : Textbook / V.G. Kakhikalo [et al.]. 2nd ed., ispr. and add. - St. Petersburg : Publishing House "Lan", 2014. - 448 p. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-1583-0. <u>http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=465184&idb=0</u>
- Animal breeding with the basics of private zootechny [Text/electronic resource] : Textbook. Part 1: Animal breeding / A.A. Nikishov [et al.]. - Electronic text data. -Moscow : Publishing House of RUDN, 2017. - 116 p. : ill. - ISBN 978-5-209-07451-9 : 64.13.

http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=460026&idb=0

 Tsarenko P.P. Introduction to animal science [Electronic resource] : Textbook / P.P. Tsarenko, A.F. Shevkhuzhev. - St. Petersburg : Publishing House "Lan", 2017. - 300 p. -(Textbooks for universities. Special literature). - ISBN 978-5-8114-2546-4. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn FindDoc&id=464948&idb=0

Resources of the Internet information and telecommunication network:

- **1.** Electronic library system of RUDN and third-party Electronic library systems to which university students have access on the basis of concluded contracts:
- Electronic library system of RUDN ELS RUDN http://lib.rudn.ru/MegaPro/Web
- ELS "University Library online"<u>http://www.biblioclub.ru</u>
- ELS Yurayt <u>http://www.biblio-online.ru</u>
- ELS "Student Consultant"<u>www.studentlibrary.ru</u>
- ELS "Lan"<u>http://eZlanbook.com/</u>
- ELS "Trinity Bridge"<u>http://www.trmost.com/</u>
- 2. Databases and search engines:
- electronic fund of legal and regulatory and technical documentation http://docs.cntd.ru/
- search engine Yandex https://www.yandex.ru/
- search engine Google <u>https://www.google.ru/</u>
- abstract database SCOPUS 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 "Breeding with the basics of private animal husbandry".

# 2. Laboratory workshop on the discipline "Breeding with the basics of private animal husbandry".

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

### 8. MID-TERM ASSESSMENT

Evaluation materials and a point-rating system<sup>\*</sup> for assessing the level of competence formation (part of competencies) based on the results of mastering the discipline "**Breeding with the basics of private animal husbandry**" 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

Signature

Signature

Nikishov A.A.

Vatnikov Yu.A.

Full name.

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

Department of Veterinary Medicine

Name Basic Curriculum

### HEAD OF THE HIGHER EDUCATION PROGRAM:

Director of the Department of Veterinary Medicine

Position, Basic curriculum

Vatnikov Yu.A.