

# SYLLABUS OF THE EDUCATIONAL COMPONENT



## GLOBAL PARASITOLOGY

specialty	211 Veterinary medicine	obligation of discipline	optional
educational program	Veterinary medicine	faculty	veterinary medicine
educational level	Master's degree	department	pharmacology and parasitology

### LECTURER

**Nikiforova Olga Vasylievna**



Higher education - veterinary medicine specialty

Scientific degree - candidate of veterinary sciences 16.00.11 - parasitology, helminthology

Academic status - associate professor of the department of parasitology

Work experience - more than 18 years

Indicators of professional activity on the subject of the course:

- author of more than 25 methodological recommendations;
- author and co-author of more than 110 scientific works, including articles indexed in scientometric databases Scopus and Web of Science – 7;
- declaratory patents for inventions – 5; training manuals – 3; copyright certificate for the work - 1;
- scientific-practical and methodical recommendations – 9;
- participant in scientific and methodical conferences.

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### GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

Purpose of discipline	is to acquire theoretical and practical knowledge in the diagnosis, treatment and prevention of parasitic diseases of animals, gaining practical
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	skills in carrying out antiparasitic measures in livestock farms and preparing undergraduate students for independent practical work.
Format	lectures, laboratory classes, independent work, individual tasks, team work, simulation project
Detailing of learning results and forms of their control	<ul style="list-style-type: none"> <li>ability to assess the state of health of animals suffering from parasitic diseases (GC1, GC2, GC3, GC9, SC2, SC3, SC4, SC6, SC7, PLO4, PLO5, PLO7) / <b>simulation team project 1</b></li> <li>ability to predict the course of parasitic diseases and the effectiveness of control measures (GC1, GC2, GC3, GC9, GC11, SC2, SC3, GC4, SC6, SC7, SC8, SC12, SC13, PLO4, PLO5, PLO6, PLO7, PLO8, PLO9, PLO10)/ <b>individual tasks on the analysis of the regulatory framework</b></li> <li>ability to evaluate the quality of treatment and preventive measures for parasitic diseases (GC1, GC2, GC3, GC9, GC11, SC2, SC3, SC8, SC12, SC13, PLO6, PLO7, PLO8, PLO9, PLO10) / <b>individual practical tasks</b></li> <li>the ability to diagnose disorders in the body of animals suffering from parasitic diseases (GC1, GC2, GC3, GC9, SC2, SC3, SC4, SC6, SC7, PLO4, PLO5, PLO7) / <b>training, team project 2</b></li> <li>implementation of environmental protection and biosecurity mechanisms for animal parasitic diseases (GC1, GC2, GC3, GC12, SC3, SC6, SC11, SC13, PLO4, PLO6, PLO9) / <b>separate element of team project 1</b></li> </ul>
Scope and forms of control	3 ECTS credits (90 hours): 12 hours of lectures, 18 hours of laboratory classes;60 hours of independent work, control testing (2 tests); final control - differentiated credits.
Requirements of the teacher	timely performance of tasks, activity, team work
Enrollment conditions	after mastering the following components: General zooparasitology. Veterinary protozoology and animal protozoa. Veterinary trematodology and animal trematodes. Veterinary cestodology and cestodoses of animals. Veterinary nematodology and animal nematodes. Veterinary acarology and animal acarosis. Veterinary entomology and entomoses of animals.

### COMPLEMENTS THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

Competences	GC1 Ability to abstract thinking, analysis and synthesis GC2 Ability to apply knowledge in practical situations GC 3 Knowledge and understanding of the subject area and profession GC 9 Ability to make informed decisions GC 11 Ability to evaluate and ensure the quality of work that performing GC 12 The desire to preserve the environment SC 2 Ability to use tools, special devices, instruments, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities SC 3 Ability to follow the rules of labor protection, asepsis and antiseptics during professional activities SC 4 Ability to conduct clinical research for the purpose to formulate conclusions about the condition of animals or to establish a diagnosis SC 6 Ability to perform collecting sampling, pack, fix and send	Program learning outcomes	PLO4 Collect anamnesic data during registration and examination of animals, make decisions on the choice of effective methods of diagnosis, treatment and prevention of animal diseases PLO 5 Establish a link between the clinical manifestations of the disease and the results of laboratory examinations PLO 6 Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies PLO 7 Formulate conclusions on the effectiveness of selected methods and means of keeping, feeding and treatment of animals, prevention of infectious and non-communicable diseases, as well as production and technological processes in enterprises for keeping, breeding or operation of animals of different classes and species PLO 8 Conduct the monitor the causes of the spread of diseases of various etiologies and biological pollution of livestock waste, as well as materials and veterinary products
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samples of biological material for laboratory research

SC 7 Ability to organize and conduct laboratory and special diagnostic tests and analyze their results

SC 8 Ability to plan, organize and implement measures for the treatment of animals of different classes and species sicked from non-communicable, infectious and invasive diseases

SC 11 Ability to apply knowledge of biosafety, bioethics and animal welfare in professional activities

SC 12 Ability to develop and implement measures to protect the population from zoonotic diseases common to animals and humans

SC 13 Ability to develop strategies for disease prevention of various etiologies

PLO 9 Develop measures to protect the population from diseases common to animals and humans

PLO 10 To offer and use expedient innovative methods and approaches of the decision of problem situations of a professional origin

## STRUCTURE OF THE EDUCATIONAL COMPONENT

### Chapter 1. Interrelationships of animals, physiology and immunological factors in the parasite-host system

Lecture 1.	Interrelationships of animals and the place of parasites in the system of the animal world	Practical class (PC) 1	Biological bases of global parasitology. Types of interrelations of organisms in nature.	Self-study work	Modern methods of diagnosis, treatment and prevention of helminthes. Research on mollusks, crustaceans and microphytes. Research on oribatid mites.
		PC 2	Definition of parasitism and taxonomy of zooparasites. Features of morphological and biological adaptations of zooparasites		
Lecture 2.	Physiology in the parasite-host system	PC 3	Rules for selecting material for parasitological studies. Transportation and storage of parasitological material		
		PC 4	Modern hematological, immunological, genetic, coproscopic and acarological methods of laboratory intravital and postmortem diagnostics of parasitosis.		
Lecture 3.	Immunological factors in the parasite-host system	PC 5	Morphological adaptations to the parasitic lifestyle of helminths and arthropods		

### Chapter 2. Geographical view of the parasite-host system and environmental pollution by helminths.

Lecture 4.	Host-parasite system from an ecological perspective	PC 6	Phylogenesis and evolution of parasites	Self-study work	Morphological features of eggs and larvae of animal helminths. Factors affecting the effectiveness of helminthological research in animals. Research on fish as an intermediate host of certain helminthiasis for infestation by larvae of parasitic
Lecture 5.	Geographical view of the parasite-host system and parasite specificity. Questions of phylogenesis and evolution of parasites	PC 7	Helminthological methods of studying environmental objects - Research of soil samples and scrapings from livestock facilities, cages, floors, enclosures, and playgrounds.		
Lecture 6.	Environmental pollution and helminthological methods of research of environmental objects	PC 8	Helminthological methods of studying environmental objects - Research of water samples from open water bodies and biological objects - intermediate hosts of helminthic invasions		

		PC 9	Helminthological methods of studying environmental objects - Research on grass and hay samples. Research on samples of vegetables, berries, fruits and table greens		pathogens.
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### BASIC LITERATURE AND METHODOLOGICAL MATERIALS

literature	<ol style="list-style-type: none"> <li>1. Domenico Otranto, Richard Wall. Veterinary parasitology. John Wiley &amp; Sons Ltd, 5th edition 2024, 896 p.</li> <li>2. Timothy M. Goater, Cameron P. Goater, Gerald W. Esch. Parasitism. The diversity and ecology of animal parasites. Second edition, Cambridge, University Press, 2001, 2014, 524 p.</li> <li>3. Gregory v. Lamann. Veterinary parasitology. Nova biomedical Press, Inc. New York, 2010, 323 p.</li> <li>4. G.M.Urquhart, J.Armour, J.L.Duncan at all. Veterinary parasitology. The faculty of veterinary medicine, the University of Glasgow, Scotland, 2nd edition 1996, 307 p.</li> </ol>	Methodical support	<ol style="list-style-type: none"> <li>1. Dwight D. Bowman Charles M. Hendrix David S. Lindsay Stephen C. Barr. Feline Clinical Parasitology. Iowa State University Press. 2002. 469 p.</li> <li>2. Principles and Practices of Canine and Feline Clinical Parasitic Diseases. Edited by Tanmoy Rana. Department of Veterinary Clinical Complex West Bengal University of Animal &amp; Fishery Sciences Kolkata, West Bengal, India. 2024 by John Wiley &amp; Sons, 301 p.</li> </ol>
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### EVALUATION SYSTEM

	SYSTEM	POINTS	ACTIVITY THAT IS ASSESSED
Final assessment (different credit, exam)Final evaluation	100 ECTS points (standard)	up to 100	40 % - Final testing
			60 % - student's current work during the semester
Final assessment (non-differential credit)	100 points ECTS (standard)	up to 100	100 % - average grade for sections
Rating of section	100 points total	up to 30	30 % - answers to test questions
		up to 30	30 % - the result of mastering the block of independent work
		up to 40	40 % - student activity in class (oral answers)

### NORMS OF ACADEMIC ETHICS AND INTEGRITY

All participants in the educational process (including students) must adhere to the code of academic integrity and the requirements stipulated in the regulation "On Academic Integrity of Participants in the Educational Process of SBTU": to demonstrate discipline, good manners, respect each other's dignity, show kindness, honesty, and responsibility.