SYLLABUS OF THE EDUCATIONAL COMPONENT

PARASITIC DISEASES OF FISH, BEES AND FUR ANIMALS

specialty	211 Veterinary medicine	obligation of discipline	selective
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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The following are involved in the teaching of the discipline.

GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

Purpose of discipline	is to acquiring theoretical and practical knowledge in the diagnosis, treatment and prevention of parasitic diseases of fish, bees and fur-bearing animals, acquiring practical skills in conducting health-improving activities in fish farms, apiaries and livestock farms, and mastering practical skills in diagnosing and combating parasitic diseases of fish, bees and fur-bearing animals in production conditions..
Format	lectures, laboratory classes, independent work, individual tasks, team work, simulation project
Detailing of learning results and forms of their control	• 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) / simulation team project 1 • 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)/ individual tasks on the analysis of the regulatory framework • 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) / individual practical tasks • 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) / training, team project 2 • implementation of environmental protection and biosecurity mechanisms for animal parasitic diseases (GC1, GC2, GC3, GC12, SC3, SC6, SC11, SC13, PLO4, PLO6, PLO9) / separate element of team project 1
Scope and forms of control	3 ECTS credits (90 hours): 12 hours of lectures, 18 hours of practical classes; 60 hours of independent work, current control (2 chapters); final control - differentiated credits.
Requirements of the teacher	timely performance of tasks, activity, team work
Enrollment conditions	after mastering the following components: Protozoa of ruminants, pigs, horses, carnivores, birds, which are rare. Trematodoses of ruminants, pigs, horses, carnivores, and birds, which are rare. Cestodoses of ruminants, pigs, horses, carnivores, birds, which are rare. Nematodes of ruminants, pigs, horses, carnivores, birds, which are rare. Acarosis of ruminants, pigs, horses, carnivores, birds, which are rare. Entomoses of various species of animals, which are rare.

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	**Program learning outcomes**	PLO4 Collect anamnestic 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

	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 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		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 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. ECOLOGICAL AND BIOLOGICAL BASIS OF PARASITISM. PROTOZOOSIS AND TREMATODOSIS OF ORNAMENTAL AND EXOTIC BIRDS

Lecture 1.	Biological and ecological foundations of parasitism. Ornamental and exotic birds as a source and vectors of pathogens of parasitic diseases. Biological pollution of the environment, structure and biodiversity of ecological-parasitic systems.	Practical class (PC) 1	Rules for taking material for parasitological studies. Modern hematological, immunological, genetic, coproscopic and acarological methods of laboratory intravital and postmortem diagnostics of parasitosis	Self-study work	The concept of parasitic and eco-parasitic systems. Labor protection when performing parasitological studies. Safety techniques when working with invasive material, ornamental and exotic birds. Basic rules for the selection, storage, and labeling of invasive material. Methods of parasitological studies of environmental objects. Basic methods of laboratory intravital and postmortem diagnostics and differential diagnostics of trematodoses. Features of conducting therapeutic and preventive measures and the use of drugs for trematode infestations of birds.
		PC 2	Features of diagnostics, treatment and prevention of the main protozoa: eimeriosis, histomoniasis, trichomoniasis, malaria, borreliosis of birds.		
Lecture 2.	Protozoal diseases of ornamental and exotic birds (eimeriosis, histomoniasis, trichomoniasis, malaria, borreliosis)	PC 3	Features of diagnostics, treatment and prevention of trematodoses of birds: prostogonimoses, echinostomatoids, notocotylidosis.		
Lecture 3.	Trematodoses of birds: prostogonimoses, echinostomatoids, notocotylidosis				

Chapter 2. CESTODOSES AND NEMATODOSES OF ORNAMENTAL AND EXOTIC BIRDS, ACAROSES AND ENTOMOSES OF ORNAMENTAL AND EXOTIC BIRDS

Lecture 4.	Cestodes of birds: hymenolipidosis, rayetinose, daveniosis, choanoteniosis, amoebotaeniosis.	PC 4	Features of diagnostics, differential diagnostics, treatment and prevention of the main cestodes of birds (hymenolipidosis, rayetinoses, daveniosis, choanoteniosis, amoebotenose).	Self-study work	Modern methods of diagnosis and differential diagnosis of cestodes (rayetinosis, daveniosis) of birds.
Lecture 5.	Main nematodoses (oxyuratosis, ascariasis, strongyloidiasis, trichuratiasis) and acanthocephaliasis (polymorphosis,	PC 5	Diagnosis and differential diagnostics, treatment and prevention of oxyuratosis, ascariasis of ornamental		Methods of intravital and postmortem diagnosis and differential diagnosis of

	filiculosis)		and exotic birds.		heterocosis and ascariasis of ornamental and exotic birds.
		PC 6	Diagnosis and differential diagnosis, treatment and prevention of strongyloidiasis and trichiasis in ornamental and exotic birds.		
Lecture 6.	Acarosis (dermanissiosis, knemidocoptosis, epidermoptosis, syringophilosis) and entomoses (malophagoses (puchoids, piriaids), siphonapterosm and cimicidoses)	PC 7	Features of the course, diagnosis, treatment and prevention of acanthocephaliasis (polymorphosis, filiculosis)		Methods of intravital and postmortem diagnosis and differential diagnosis of strongyloidiasis and trichiasis of ornamental and exotic birds.
		PC 8	Features of diagnosis and differential diagnosis, treatment and prevention of acariasis: (dermanissiosis, knemidocoptosis, epidermoptosis, syringophilosis) in ornamental and exotic birds.		Modern methods (mortal and vital) of diagnosis of acarosis of birds.
		PC 9	Diagnosis and differential diagnosis, treatment and prevention of the main entomoses: malophagosis, siphonapterosis and cimicidosis.		Modern means of treatment and prevention of acaroid and entomotic invasions of ornamental and exotic birds.

BASIC LITERATURE AND METHODOLOGICAL MATERIALS

literature	1. 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. 2. Gregory v. Lamann. Veterinary parasitology. Nova biomedical Press, Inc. New York, 2010, 323 p. 3. 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. 4. Dwight D. Bowman Charles M. Hendrix David S. Lindsay Stephen C. Barr. Feline Clinical Parasitology. Iowa State University Press. 2002. 469 c	Methodical support	

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.