



SYLLABUS OF THE EDUCATIONAL COMPONENT

VETERINARY PARASITOLOGY

Specialty	211 Veterinary Medicine	Obligation of discipline	Compulsory
Educational program	Veterinary Medicine	Faculty	Veterinary Medicine
Educational level	Master's degree	Department	Pharmacology and Parasitology

LECTURER

Nikiforova Olga Vasylijevna



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 (DISCIPLINE)

Purpose of discipline	to acquire theoretical and practical knowledge in the diagnosis, treatment and prevention of parasitic diseases of animals, gaining practical 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"> • 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, GC2, GC3, GC4, GC6, GC7, GC8, GC12, GC13, 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, GC9, SC3, SC6, SC11, PLO4, PLO6, PLO9) / separate element of team project 1
Scope and forms of control	11 ECTS credits (330 hours): 42 hours of lectures, 102 hours of laboratory classes; 126 hours of independent work, modular control (6 modules); final control - non-differentiated credits (2), exam, clinical practice, term paper.
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

COMPLIANCE WITH THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

Competences	<p>GC1 Ability to abstract thinking, analysis and synthesis</p> <p>GC2 Ability to apply knowledge in practical situations</p> <p>GC 3 Knowledge and understanding of the subject area and profession</p> <p>GC 9 Ability to make informed decisions</p> <p>GC 11 Ability to evaluate and ensure the quality of work that performing</p> <p>GC 12 The desire to preserve the environment</p> <p>SC 2 Ability to use tools, special devices, instruments, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities</p>	Program learning outcomes	<p>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</p> <p>PLO 5 Establish a link between the clinical manifestations of the disease and the results of laboratory examinations</p> <p>PLO 6 Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies</p> <p>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</p>
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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 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

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

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 (DISCIPLINE)

Content module 1. «Veterinary protozoology and protozooses of animals» General parasitology

Lecture 1.	Characteristics of protozoa. Piroplasmidoses of animals.	Laboratory-practical class (LPC) 1, 2	Introductory lesson. Diagnostics and differential diagnosis of babesiidoses of ruminants, horses, dogs and cats.	Self-study work	Features of epizootology of protozooses, helminthoses, acaroses and entomoses of animals. Features of immunity with protozooses, helminthoses, acaroses and entomoses of animals. Fundamentals of prevention of invasive diseases. Nosematoses and amebiosis of bees. Fish ciliatoses (chilodenelosis, trichodinosis, and ichthyophthiriosis). Definition, characteristics of pathogens, epizootological
Lecture 2.	Characteristic of coccidiida. Eimerioses of hens, rabbits and ruminants. Isoporinoses of animals (toxoplasmosis, sarcocystosis, cystoisosporoses of animals).	LPC 3, 4	Diagnostics and differential diagnosis of coccidiidoses (eimeriosis) of poultry, rabbits, ruminants and fish		
		LPC 5, 6	Diagnostics and differential diagnosis of animals' isosporinoses - toxoplasmosis, sarcocystosis, cystoisosporosis.		
		LPC 7	Testing equipment of laboratory diagnostics of animals' blood parasite protozooses. Testing equipment of laboratory diagnostics of animals' coccidiosis.		
Lecture 3.		LPC 8	Diagnostics and differential diagnosis of animals' zoomastigophoroses – trichomonosis of cattle and		

	Zoomastigophoroses of animals (ciliophoroses, trichomonosis of cattle, histomonosis of turkeys).	LPC 9	histomonosis of poultry and trypanosomosis of solipeds. Diagnostics and differential diagnosis of pigs' balantidiosis, ruminants' anaplasmosis, poultry's borreliosis.		data, clinical sings, diagnostics, treatment and preventive measures.
Content module 2. Veterinary trematodology and trematodoses of animals. Veterinary cestodology and cestodoses of animals.					
Lecture 4.	Veterinary helminthology and helminthoses of animals. Trematodoses of ruminants: fasciolosis and paramfistomidoses. Dicrocoeliosis and eurytremosis of ruminants.	LPC 10	Characteristics of the class Trematoda. Diagnostics and differential diagnosis of fasciolosis and paramphistomidoses in ruminants.	Self-study work	Trematodoses of carnivorous (Clonorchosis, Metorchosis, Pseudamphistomosis, Alariosis, Metagonimosis, Paragonimosis, Heterophyosis, Schistosomosis). Mesocestoidoses of carnivorous, hydatigerosis of cats, amoebotenirosis and choanotaeniosis of hens. Ligulidoses of fish: definition, characteristics of pathogens, epizootological data, clinical sings, diagnostics, treatment and preventive measures. Definition, characteristics of pathogens, epizootological data, clinical sings, diagnostics, treatment and preventive measures.
		LPC 11, 12	Diagnostics and differential diagnosis of dicrocoeliosis, eurytremosis in ruminants. Diagnostics and differential diagnosis of carnivorous' opisthorchidoses.		
Lecture 5.	Trematodoses of birds (prostogonimosis, echinostomatidoses, notocotylidoses) and carnivorous (opisthorchosis, etc.).	LPC 13	Diagnostics and differential diagnosis of poultry's trematodoses: prostogonimosis, echinostomatidoses and notocotylidoses.		
		LPC 14, 15	Testing equipment of lifetime and post-mortem diagnostics of helminthous invasions of animals.		
Lecture 6.	Veterinary cestodology and cestodoses of animals. Larval cestodoses of animals: cysticercoses, coenurosis, echinococcosis.	LPC 16	General characteristic of <i>Cestoda</i> class. Type of Cestoda's larvae. Diagnostics and differential diagnosis of cysticercoses bovis and cellulose in animals.		
		LPC 17	Diagnostics and differential diagnosis of cysticercoses tenuicolis and pisiformis in animals. Diagnostics and differential diagnosis of coenurosis, echinococcosis and alveococcosis larvae in animals.		
Lecture 7.	Imaginal cestodoses of carnivorous - taenioses, dipylidiosis, diphyllbothriosis. Imaginal cestodoses of ruminants, horses and waterfowl.	LPC 18, 19	Diagnostics and differential diagnosis of imaginal cestodoses of taeniidoses in carnivorous. Diagnostics and differential diagnosis of dipylidiosis and diphyllbothriosis in carnivorous.		
		LPC 20, 21	Diagnostics and differential diagnosis of anoplocephalatoses in solipeds. Diagnostics and differential diagnosis of anoplocephalatoses in ruminants.		
		LPC 22	Diagnostics and differential diagnosis of cestodoses of waterfowl and land birds		

Content module 3. Veterinary nematodology and nematodoses of animals P I

Lecture 1.	Veterinary nematodology and nematodoses of animals. Oxyuratoses of animals: oxyurosis of horses, passalurosis of rabbits, skrjabinemosis of sheep, heterakosis of birds.	LPC 1	Characteristics of nematodes of suborder <i>Oxyurata</i> . Diagnostics and differential diagnosis of solipeds' oxyurosis, rabbits' passalurosis.	Self-study work	Habronemosis and draschiosis of solipeds. Definition, characteristics of pathogens, epizootological data, clinical sings, diagnostics, treatment and preventive measures.
		LPC 2	Characteristics of nematodes of suborder <i>Oxyurata</i> . Diagnostics and differential diagnosis of skrjabinemosis of small cattle, heterakidoses of poultry.		
Lecture 2.	Ascaridatoses of animals: ascarosis of swine, parascaris of horses, neoascaris of calves, Ascaridatoses of carnivorous and ascaridiosis of poultry. Anisakidoses of fish and poultry.	LPC 3	Characteristics of nematodes of suborder <i>Ascaridata</i> . Diagnostics and differential diagnosis of ascarosis of pigs, ascaridatoses of carnivorous.		
		LPC 4	Diagnostics and differential diagnosis of solipeds' parascaris and calves' neoascaris. Diagnostics and differential diagnosis of ascaridiosis of poultry, anisakidoses of fish and poultry.		
Lecture 3.	Strongylatoses of the digestive tract of animals: ruminants (chabertiosis, oesophagostomosis, bunostomosis, nematodiosis, haemonchosis), strongylidoses of horses. Strongylatoses of the digestive tract of swine, carnivorous and geese.	LPC 5	Characteristics of nematodes of suborder <i>Strongylata</i> . Diagnostics and differential diagnosis of strongylidoses of digestive tract in solipeds Diagnostics and differential diagnosis of strongylatoses of digestive tract in ruminants.		
		LPC 6	Diagnostics and differential diagnosis of ancylostomatidoses of carnivorous, oesophagostomosis of pigs and amidostomosis of geese.		
Lecture 4.	Strongylatoses of respiratory tract of animals: dictyocaulosis of ruminants, metastrongylosis of swine, muelleriosis of sheep and goats, syngamosis of poultry.	LPC 7	Diagnostics and differential diagnosis of strongylatoses of respiratory tract in ruminants, pigs and poultry.		

Content module 4. Veterinary nematodology and nematodoses of animals P 2

Lecture 5.	Trichuratoses of animals: trichurosis of pigs, ruminants and carnivorous, trichinelosis of pigs, capillarioses of animals.	LPC 8	Characteristics of nematodes of suborder <i>Trichurata</i> . Diagnostics and differential diagnosis of animals' trichoroses and capillariosis.	Self-study work	Capillariosis and Thominxosis of fur animals and poultry. Definition, characteristics of pathogens, epizootological data, clinical sings, diagnostics,
		LPC 9	Diagnostics and differential diagnosis of animals' trichinelosis.		

Lecture 6.	Spiruratoses of animals: thelaziosis of cattle, tetramerosis, streptocarosis and echinuriosis of waterfowl.	LPC 10	Characteristics of nematodes of suborder <i>Spirurata</i> . Diagnostics and differential diagnosis of thelaziosis of cattle and spiruratoses of poultry (tetramerosis, streptocarosis, echinuriosis).		treatment and preventive measures.
Lecture 7.	Filariatoses of animals: parafilariosis of horses, onchocercoses and setarioses of cattle and horses. Dirofilariosis of dogs.	LPC 11	Characteristics of nematodes of suborder <i>Filariata</i> . Diagnostics and differential diagnosis of onchocercoses and setarioses, parafilariosis of ruminants and horses and dirofilariosis of carnivorous.		
		LPC 12	Diagnostics and differential diagnosis of parafilariosis of ruminants and horses and dirofilariosis of carnivorous.		
		LPC 13	Characteristics of nematodes of suborder <i>Rhabditata</i> . Diagnostics and differential diagnosis of strongyloidoses of young animals.		
		LPC 14	General characteristics of helminthes of <i>Acanthocephala</i> class. Diagnostics and differential diagnosis of macracanthorhynchosis of pigs, poultry's polymorphosis and filicollis.		

Content module 5. Veterinary acarology and acaroses of animals

Lecture 1.	Veterinary acarology and acaroses of animals. Parasitiformes ticks: <i>Ixodidae</i> , <i>Argasidae</i> and <i>Dermanyssidae</i> .	LPC 1, 2	Characteristics of <i>Arthropoda</i> of subclass <i>Acari</i> . Ticks' taxonomy. Parasitiformes ticks. Morphological identification of ixodides to the genus and their biological classification.	Self-study work	Listrophorosis of rabbits. Acarological disease of bees. Cheiletirosis of dogs and rabbits. Definition, characteristics of patho-gens, epizootological data, clinical sings, diagnostics, treatment and preventive measures.
		LPC 3	Morphological identification of <i>Argasidae</i> and <i>Dermanyssidae</i> ticks to the genus. Diagnostics and differential diagnosis of acaraposis and varroosis of bees.		
Lecture 2.	Acariformes mites and acaroses of animals. Sarcoptidoses of animals: sarcoptosis and notoedrosis.	LPC 4	Acariformes mites. Sarcoptidoses of animals. Diagnostics and differential diagnosis of sarcoptosis and notoedrosis.		
Lecture 3.	Psoroptidoses of animals: psoroptosis, chorioptosis and otodectosis.	LPC 5	Psoroptidoses of animals: diagnostics and differential diagnosis of psoroptosis.		
		LPC 6	Psoroptidoses of animals: diagnostics and differential diagnosis of chorioptosis and otodectosis.		

Lecture 4.	Demodecosis of animals. Knemidocoptosis of birds.	LPC 7	Trombidiformes mites. Diagnostics and differential diagnosis of poultry' knemidocoptosis and demodecosis of animals.		
Content module 6. Veterinary entomology and entomoses of animals					
Lecture 5.	Veterinary entomology and entomoses of animals. Botfly invasions: hypodermosis of cattle, oestrosis of sheep, rhinoestrosis and gastrophilosis of horses.	LPC 8	Characteristics of <i>Arthropoda</i> of Class <i>Insecta</i> . Botfly invasions of animals: diagnostics and differential diagnosis of cattle's hypodermosis.	Self-study work	Dermatobiosis, oedemagenosis, cephalopinosi and pharingomiosis of ruminants. Braulosis, senotainiosis, and conopidoses of bees. Hyppoboscosis, lipoptenosis, and linognathosis of ruminants. Definition, characteristics of pathogens, epizootological data, clinical sings, diagnostics, treatment and preventive measures.
		LPC 9	Botfly invasions of animals: diagnostics and differential diagnosis of cattle's oestridoses (oestrosis, crivelliosis, cephenomyosis).		
		LPC 10	Botfly invasions of animals: diagnostics and differential diagnosis of rhinoestrosis and gastrophilosis of soliped.		
Lecture 6.	Dipterous blood-sucking insects (Midges): clegs, blood-sucking flies, blackflies, punkies, mosquitoes, sandflies, horse ked (forest fly). Zoophilous flies – blood-sucking and non-blood-sucking, their role in the pathology of animals.	LPC 11	Blood-sucking <i>Diptera</i> insects (Midges): morphological and biological identification of clegs, blackflies, punkies, mosquitoes and sandflies.		
		LPC 12	Zoophilous flies: morphological and biological identification of family <i>Muscidae</i> , <i>Sarcophagidae</i> , <i>Calliphoridae</i> , <i>Glossinidae</i> .		
		LPC 13	Diagnostics of simuliotoxicosis and animals' myiasis (Wohlfahrtiosis, Luciliosis).		
Lecture 7.	Wingless insects: melophagosis of sheep, siphunculatoses, mallophagoses and siphonapteroses of animals.	LPC 14	Wingless insects –permanent ectoparasites of animals: melophagosis of sheep (keds), Siphunculatoses of animals.		
		LPC 15	Wingless insects – permanent ectoparasites of animals (Mallophagoses and Siphonapteroses of mammals and poultry).		

BASIC LITERATURE AND METHODOLOGICAL MATERIALS

RECOMMENDED BOOKS	
Literature	<p>Basic literature</p> <ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Workbook for laboratory classes of educational discipline «Veterinary Parasitology» for students of IV-V years of second master's level in speciality 211 – Veterinary medicine. / Yu.O. Prykhodko, O.V. Nikiforova, O.V. Mazanny, O.V. Fedorova, P.V.Lulin. Kh., 2019. Part I. 61 p. 2. Workbook for laboratory classes of educational discipline «Veterinary Parasitology» for students of IV-V years of second master's level in speciality 211 – Veterinary medicine. / Yu.O. Prykhodko, O.V. Nikiforova, O.V. Mazanny, O.V. Fedorova, P.V.Lulin. Kh., 2020. Part II. 68 p. 3. Workbook for laboratory classes of educational discipline «Veterinary Parasitology» for students of IV-V years of second master's level in speciality 211 – Veterinary medicine. / Yu.O. Prykhodko, O.V. Nikiforova, O.V. Mazanny, O.V. Fedorova. Kh., 2020. Part III. 68 p. 4. Methodical instructions for the implementation of the course project of the discipline "Veterinary Parasitology" (for students of IV-V courses second master's level in speciality 211 – Veterinary medicine / Yu.O. Prykhodko, O.V. Nikiforova // Kharkiv State Zooveterinary Academy. The Department of Parasitology. – Kh.: EPD KhSZVA, 2020. – 12 c.

EVALUATION SYSTEM ([electronic link to regulations](#))

	SYSTEM	POINTS	ACTIVITY TO BE EVALUATED
Final assessment	100 points ECTS (standard)	up to 50	50% of the average grade for the modules
		up to 50	Final testing
Modular assessment	100 points total	up to 50	answers to test questions
		up to 20	oral answers in laboratory and practical classes
		up to 30	the result of mastering the block of independent work

NORMS OF ACADEMIC ETHICS AND CHARITY

All participants in the educational process (including those seeking education) must adhere to the code of academic integrity and the requirements set forth in the provision "On academic integrity of participants in the educational process of DBTU": show discipline, education, respect each other's dignity, show kindness, honesty, responsibility.