

SYLLABUS OF THE EDUCATIONAL COMPONENT



VETERINARY TOXICOLOGY

specialty	211 Veterinary medicine	mandatory discipline	mandatory
educational program	Veterinary medicine	faculty	of veterinary medicine
educational level	Master's degree	Department	pharmacology and parasitology

TEACHER

Ladohubets Olena Vasyliivna



Higher education - specialty biologist
 Scientific degree - candidate of biological sciences 03.00.13 Human and animal physiology
 Academic title - associate professor of the department of pharmacology and parasitology
 Work experience - 20 years
 Indicators of professional activity on the subject of the course:

- author of more than 7 methodological developments;
- author and co-author of more than 120 scientific works, including articles indexed in Web of Science scientometric databases – 6,
- scientific-practical and methodical recommendations – 7,
- educational and methodological manuals – 4, GSTU – 2.

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The following are involved in the teaching of the discipline: associate professor, candidate of medicine sciences Duchenko Kateryna Andriivna.

GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT (DISCIPLINE)

Goal	providing students with the necessary theoretical knowledge and practical skills in the safe and effective use of animal protection products; methods of prevention of the negative impact of toxic substances on the body of productive animals, including birds, fish and bees
Format	lectures, practical classes, independent work, individual tasks
Detailing of learning results and forms of their control	• The ability to summarize information and make informed decisions regarding the occurrence, spread, characteristics of the course, measures for diagnosis and treatment of animal poisoning (GC1,GC2,GC9,GC11,PLO5,PLO6,PLO7) / individual tasks for analysis • • Ability to choose the object and methods of toxicological research (GC1, GC7, GC9, PLO5, PLO6, PLO7) / individual tasks for analysis • The ability to combine the results of the clinical examination of animals with the results of a toxicological study in order to establish a diagnosis (GC1,GC7,GC11,PLO5,PLO6,PLO7) / individual tasks for analysis • Ability to make informed decisions during toxicological studies among animals of various species (GC1,GC7,GC9,GC11,PLO5,PLO6,PLO7) / individual tasks for analysis • • The ability to correctly choose the criteria for evaluating animal poisonings of various species and carry out the diagnosis, treatment and prevention of animal poisonings (GC1,GC7,GC9,GC11,PLO5,PLO6,PLO7) / individual tasks for analysis
Scope and forms of control	4 ECTS credits (120 hours): 14 hours of lectures, 44 hours of laboratory classes; 62 hours of independent work, control testing (2 tests); final control - differentiated assessment.
Requirements of the teacher	timely completion of tasks, activity, teamwork
Enrollment conditions	after mastering the following components: (list)...." or "free enrollment"

COMPLEMENTS THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

Competences	GC1. Ability to think abstractly, analyze and synthesize. GC2. Ability to apply knowledge in practical situations. GC7. Ability to conduct research at the appropriate level GC9. Ability to make informed decisions. GC11. Ability to evaluate and ensure the quality of work performed SC11. Ability to apply knowledge of biosafety, bioethics and animal welfare in professional activities	Program learning outcomes	PLO5. Establish a connection between the clinical manifestations of the disease and the results of laboratory tests. PLO6. Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies. PLO7. Formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of infectious and non-infectious diseases, as well as production and technological processes at enterprises for keeping, breeding or operating animals of various classes and species.
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STRUCTURE OF THE EDUCATIONAL COMPONENT

Chapter 1. General toxicology					
Lecture 1.	Introduction to the discipline Veterinary toxicology.	laboratory- practical classes (LPC 1)	Chemical and toxicological analysis. Purpose, task and procedure of sampling.	Independent work	The history of the development of toxicological science.
Lecture 2.	General principles of diagnosis, emergency care and prevention of poisoning.	LPC 2-3	Chemical and toxicological analysis. Purpose, task and procedure of sampling.		History of the development of veterinary toxicology.
		LPC 4	Fundamentals of toxicokinetics and toxicodynamics of xenobiotics.		Founders of veterinary toxicology.
Lecture 3.	Provision of emergency aid and treatment of animals in case of poisoning.	LPC 5	Poisoning of animals with compounds of heavy metals.		Devices and equipment of chemical and toxicological laboratories.
		LPC 6	Toxicology of compounds containing sulfur and its compounds		
Lecture 4.	Toxicology of compounds containing metals and arsenic. Toxicology of compounds containing sulfur and its compounds.	LPC 7	Poisoning of animals with nitrates and nitrites, table salt and urea		The procedure for maintaining documentation and drawing up a conclusion.
		LPC 8	Animal poisoning with organophosphate and organochlorine pesticides.		
		LPC 9	Animal poisoning with carbamic acid derivatives, phenoxy acids, synthetic pyrethroid		
		LPC 10	Poisoning of animals with derivatives of dipyridylum, coumarins, and dioxins		
		LPC 11	Poisoning of animals with fodder and feed additives that contain toxic substances of synthetic origin.		
		LPC 12	Classification of mycotoxins of different groups		
		LPC 13	Peculiarities of the effect of mycotoxins on the animal body		
		LPC 14	Fusariotoxycosis		
		LPC 15	Treatment and prevention of certain mycotoxycosis		
Chapter 2. Poisoning of animals with toxins of natural origin					
Lecture 5.	Mycotoxycosis.	LPC 16	Classification of mycotoxins of different groups.	Independent work	General characteristics, diagnosis, prevention, and treatment of certain mycotoxycosis: mycotoxic nephropathy of pigs, penicillotoxycosis, citrininotoxycosis, tremorgentoxycosis, rubratoxycosis Toxicology of poisons of animal
		LPC 17	Phytotoxycosis of animals		
Lecture 6.	Mycotoxycosis. Aspergillotoxycosis.	LPC 18	Diagnosis of animal poisoning by plants of various groups.		
Lecture 7	Phytotoxycoses	LPC 19	Peculiarities of animal poisoning with toxins of animal origin.		
		LPC 20	Features of animal poisoning with algotoxins.		

		LPC 21-22	Poisoning of animals with feed and feed additives that contain toxins of natural and synthetic origin.		origin (bee poisons, viper poisons, spider poisons, fish poisons, other poisons of biological origin)
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BASIC LITERATURE AND METHODOLOGICAL MATERIALS

literature	1. Radhey Mohan Tiwari Malini Sinha Veterinary Toxicology.- Oxford Book Compan, 2010.-278 p. 2. K. Plumlee Clinical Veterinary Toxicology- Mosby, 2014,- 477 p. 3. Murray E. Fowler Veterinary Zootoxicology – CRC Press.,2018.- 250 p. 4. Stephen B. Hooser and Dr. Safdar A. Khan. Common Toxicologic Issues in Small Animals- Elsevier, 2018.- 322 P.	Methodical	1. Veterinary toxicology. A workbook. Nikiforova O.V., Ladogubets O.V., Duchenko K.A Harkusha I.V., Ladogubets O.V., Duchenko K.A., Kh.: DBTU.-2024.-145 p.
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EVALUATION SYSTEM				
SYSTEM		POINTS	ACTIVITY TO BE EVALUATED	
Final assessment (different credit, exam)	100 points ECTS (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 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.