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 Vasylievna

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.

phone	0504022811	Email	ladohubets@gmail.com	remote support	Moodle

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.**

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 dipyridylium, 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	**Fusariotoxicosis**		
		LPC 15	**Treatment and prevention of certain mycotoxicosis**		
Chapter 2. Poisoning of animals with toxins of natural origin					
Lecture 5.	**Mycotoxicosis.**	**LPC 16**	**Classification of mycotoxins of different groups.**	**Independent work**	**General characteristics, diagnosis, prevention, and treatment of certain mycotoxicosis: mycotoxic nephropathy of pigs, penicillotoxicosis, citrininotoxicosis, tremorgentoxicosis, rubratoxicosis Toxicology of poisons of animal**
		LPC 17	**Phytotoxicosis of animals**		
Lecture 6.	**Mycotoxicosis. Aspergillotoxicosis.**	**LPC 18**	**Diagnosis of animal poisoning by plants of various groups.**		
Lecture 7	**Phytotoxicoses**	**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)

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 support	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.

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.