EDUCATIONAL COMPONENT SYLLABUS

CLINICAL DIAGNOSIS OF ANIMAL DISEASES

specialty	**211 Veterinary medicine**	**the obligation of discipline**	**mandatory**
educational program	**« Veterinary medicine »**	**faculty**	**veterinary medicine**
educational level	**master**	**department**	**internal diseases and clinical diagnostics of animals**

TEACHER

Vikulina Galina Viktorivna

Higher education – Master of Veterinary Medicine, Master of Higher Education Pedagogy
Scientific degree - Candidate of Veterinary Sciences in specialty 16.00.01 - diagnostics and therapy of animals, Doctor of Philosophy
Academic title – associate professor
Work experience – 15 years
Indicators of professional activity on the course topic:

- author and co-author of about 60 scientific publications;
- co-author of the textbook "Veterinary Clinical Biochemistry" (2010)
- 18 years of scientific work experience;
- participant in scientific and methodological conferences.

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GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT (DISCIPLINE)

Aim	to study of clinical examination methods used in the diagnosis of diseases of different etiology - internal, surgical, gynecological, infectious, parasitic, and is therefore the basis of all subsequent clinical subjects: internal diseases, obstetrics, surgery, epizootology and parasitology.
Form	lectures, laboratory classes, practical classes, independent work, individual assignments.
Detailing of learning outcomes and forms of their control	• Know and correctly use the terminology of veterinary medicine (PLO1) / individual and laboratory classes. • Use information from domestic and foreign sources to develop diagnostic, treatment, and business strategies (PLO2) / individual and laboratory classes. • Determine the essence of physicochemical and biological processes that occur in the animal body in normal and pathological conditions (PLO3) / individual and laboratory classes. • Establish a connection between the clinical manifestations of the disease and the results of laboratory tests (PLO5) / individual and laboratory classes.
Scope and forms of control	10 ECTS credits (300 hours): 30 hours of lectures, 122 hours of laboratory and practical classes; 90 hours of independent work, ongoing control; final control – exam, course work.
Teacher requirements	timely completion of tasks, activity, teamwork
Enrollment conditions	according to the curriculum

COMPLEMENTARY EDUCATION STANDARDS AND CURRICULUM

Competencies	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. GC8. Ability to learn and master modern knowledge. GC9. Ability to make informed decisions. GC11. Ability to evaluate and ensure the quality of work performed. SC1. Ability to establish the features of the structure and functioning of cells, tissues, organs, their systems and apparatuses of the animal body of different classes and species - mammals, birds, insects (bees), fish and other vertebrates. SC2. Ability to use tools, special devices, instruments, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities. SC6. Ability to select, pack, fix and send samples of biological material for laboratory research. SC7. Ability to organize and conduct laboratory and special diagnostic tests and analyze their results.	**Program learning outcomes**	PLO1. Know and correctly use the terminology of veterinary medicine PLO4. Collect anamnestic data during registration and examination of animals, make decisions regarding the choice of effective methods of diagnosis, treatment and prevention of animal diseases PLO5. To establish a connection between the clinical manifestations of the disease and the results of laboratory studies

STRUCTURE OF THE EDUCATIONAL COMPONENT

Chapter 1 General diagnosis					
Topic 1	Clinical diagnostics as a science, its purpose and tasks at the current level of animal husbandry development	**LPC 1**	Security and personal hygiene in the studied animals	**Independent work**	Features of the study of small pets. Rash. Pathological changes of the skin and subcutaneous tissue; name the elements of primary and secondary rashes and pathological changes of the skin and give them a clinical description. Physiological indicators of body temperature in different species of animals. Thermometry and its importance in veterinary diagnostics. Fever
Topic 2	Recognition of the disease and prediction of its course and end	**LPC 2-3**	Plan and methods of clinical examination of animals		
		LPC 4-5	Definition of animal habitus and skin research		
Topic 3	Study of the habitus and skin of animals	**LPC 6-7**	Examination of visible mucous membranes and lymph nodes		
		LPC 8-9	Determination of basic physiological parameters in animals		
Topic 4	Thermometry and fever				
Chapter 2 Examination of the cardiovascular system					
Topic 5	Study of the cardiovascular system and its importance in assessing the state of the animal body	**LPC 10**	Determining the boundaries of the heart and the study of heartbeat	**Independent work**	Topography of the heart (its boundaries) in different species of animals and methods of their determination. Heart murmurs are their characteristics The main syndromes of cardiovascular insufficiency. Classification of cardiac arrhythmias (list all arrhythmias depending on the violation of basic heart functions) Functional tests and their practical use. Laboratory methods for diagnosing heart disease
Topic 6	Study of heart murmurs	**LPC 11-12**	Examination of heart tones		
		LPC 13-14	Detection of heart murmurs and their diagnostic evaluation		
Topic 7	ECG, arrhythmias of the heart	**LPC 15**	Research of arterial pulse and blood vessels		
		LPC 16	Electrocardiography		
Topic 8	Examination of blood vessels. Functional diagnosis of the cardiovascular system	**LPC 17**	Functional diagnosis of the heart		
Chapter 3 Examination of the respiratory system					
Topic 9	Research of respiratory movements and upper respiratory tract	**LPC 18**	Examination of respiratory movements in animals	**Independent work**	The main syndromes of pathology of the respiratory system Pathological rhythms of respiration and their clinical evaluation. Classification of respiratory noises. Pathological respiratory noises at bronchitis, pneumonias and pleurisies their clinical characteristics.
Topic 10	Chest examination	**LPC 19-20**	Examination of the upper respiratory tract		
Topic 11	Auscultation of the lungs	**LPC 21-22**	Examination of the chest and determination of the physical condition of the lungs		
		LPC 23-24	Clinical evaluation of primary and secondary respiratory noises		
		LPC 25	Plegaphony, thoracentesis, sputum examination		
Chapter 4 Examination of digestive system					

Topic 12	The value of the study of the digestive system	**LPC 26-27**	Examination of feed and water intake	**Independent work**	The main syndromes in pathology of the digestive system.
Topic 13	Examination of the oral cavity, pharynx and oesophagus, pancreas	**LPC 28**	Examination of rumen and reticulum in ruminants		Reticulitis tests. Classification of colic in horses.
Topic 14	Study of a single-chamber stomach in animals	**LPC 29**	Research of omasum, abomasum and intestines in ruminants		Scheme of fecal examination and basic indicators in healthy animals
Topic 15	Examination of the intestine and the act of defecation in animals	**LPC 30-31**	Research of stomach and intestines in horses, pigs, dogs		The main syndromes in liver disease.
Topic 16	Liver examination	**LPC 32**	Animal intubation		
		LPC 33-34	Liver examination. Rectal examination of animals		
		LPC 35	Examination of the act of defecation and feces		
Chapter 5 Examination of the urinary system					
Topic 17	Clinical significance of the study of urinary organs in animals	**LPC 36-37**	Examination of the kidneys, ureters, urinary tract and urethra	**Independent work**	Indicators of urinary frequency and urine output. Features of the study of horse urine. The scheme of the study of urine and the main indicators in healthy animals. The main syndromes of lesions of the urinary system.
		LPC 38	Urine tests		
Chapter 6 Blood system research. Diagnosis of metabolic disorders					
Topic 18	The value of hematological studies in the diagnosis of animal diseases and in assessing the state of natural resistance	**LPC 39**	Determination of ESR, hemoglobin and erythrocytes	**Independent work**	Physiological properties of blood and their clinical significance. Evaluation of clinical blood test results based on research results
Topic 19	Morphological examination of blood	**LPC 40**	Determination of the number of leukocytes. Derivation of the leukogram		Evaluation of indicators of biochemical analysis of blood according to research results.
Topic 20	Examination of hematopoiesis	**LPC 41-42**	Determination of biochemical parameters of blood		The main clinical syndromes of metabolic diseases.
Topic 21	Diagnosis of disorders of protein, carbohydrate, lipid, water-electrolyte metabolism				Diagnosis of endocrine pathologies in animals
Chapter 7 Bases of X-ray diagnosis					
Topic 22	Tasks and significance of veterinary X-ray diagnostics at the present stage of animal husbandry development	**LPC 43**	Radioscopy	**Independent**	The main properties of X-rays. Types of X-ray machines. Major diseases that require X-ray examination.
		LPC 44	Radiography		
Chapter 8 Examination of the nervous system					

Topic 23	The value of the study of the nervous system as the leading system of the body	**LPC 45**	Study of the state of the somatic nervous system	**Independent work**	The main syndromes of diseases of the nervous system. Zones of Zachary, Ged, Roger.
		LPC 46	Study of the state of the autonomic nervous system		

BASIC LITERATURE AND METHODOLOGICAL MATERIALS

Bellwood, Brianne. Veterinary technician's handbook of laboratory procedures / Brianne Bellwood, Melissa Andrasik-Catton, 2014. – 201 p.
Jackson P. G. G. et al. Clinical examination of farm animals. – Oxford : Blackwell Science, 2002.
Dirksen G. et al. Clinical examination of cattle. – Verlag Paul Parey, 1990. – №. Ed. 3.
Radostits O. M. et al. Veterinary clinical examination and diagnosis. – WB Saunders, 2000.
Constable P. D. Clinical examination of the ruminant nervous system //The Veterinary clinics of North America. Food animal practice. – 2004. – Т. 20. – №. 2. – С. 185-214, v.
Abdisa T. Review on practical guidance of veterinary clinical diagnostic approach //International Journal of Veterinary Science and Research. – 2017. – Т. 3. – №. 1. – С. 030-049.
Bagley R. S. Fundamentals of veterinary clinical neurology. – Blackwell Pub., 2005.
Douglas G., Nicol F., Robertson C. (ed.). Macleod's Clinical Examination E-Book. – Elsevier Health Sciences, 2013.
Hill P. B. et al. Survey of the prevalence, diagnosis and treatment of dermatological conditions in small animals in general practice //Veterinary record. – 2006. – Т. 158. – №. 16. – С. 533-539.
Veterinary Clinical Procedures in Small Animal Practice,Vicki Judah – 2014 – 418 p.
Performing the Small Animal Physical Examination Ryane E. Englar, DVM, DABVP (Canine and Feline Practice) – 2017 – 1221 p.
Bowen J., Heath S. Behaviour problems in small animals: practical advice for the veterinary team. – Elsevier Health Sciences, 2005.
Braun J. P. et al. The preanalytic phase in veterinary clinical pathology //Veterinary Clinical Pathology. – 2015. – Т. 44. – №. 1. – С. 8-25.
Roudebush P. et al. Application of evidence-based medicine to veterinary clinical nutrition //Journal of the American Veterinary Medical Association. – 2004. – Т. 224. – №. 11. – С. 1766-1771.
Robinson N. J. et al. Investigating common clinical presentations in first opinion small animal consultations using direct observation //Veterinary record. – 2015. – Т. 176. – №. 18. – С. 463-463.
Widmer W. R., Biller D. S., Adams L. G. Ultrasonography of the urinary tract in small animals //Journal of the American Veterinary Medical Association. – 2004. – Т. 225. – №. 1. – С. 46-54.
Hodges B. D. The objective structured clinical examination: three decades of development //Journal of Veterinary Medical Education. – 2006. – Т. 33. – №. 4. – С. 571-577.
Hinchcliff K. W., Byrne B. A. Clinical examination of the respiratory system //Veterinary Clinics of North America: Equine Practice. – 1991. – Т. 7. – №. 1. – С. 1-26.
Ohlerth S., Scharf G. Computed tomography in small animals–Basic principles and state of the art applications //The Veterinary Journal. – 2007. – Т. 173. – №. 2. – С. 254-271.
Tyrrell D., Beck C. Survey of the use of radiography vs. ultrasonography in the investigation of gastrointestinal foreign bodies in small animals //Veterinary radiology & ultrasound. – 2006. – Т. 47. – №. 4. – С. 404-408.
Tams T. R., Rawlings C. A. Small Animal Endoscopy-E-Book. – Elsevier Health Sciences, 2010.
Radostits O. M. et al. (ed.). Veterinary Medicine E-Book: A textbook of the diseases of cattle, horses, sheep, pigs and goats. – Elsevier Health Sciences, 2006.
Willard M. D., Tvedten H. Small Animal Clinical Diagnosis by Laboratory Methods-E-Book. – Elsevier Health Sciences, 2011.

ELECTRONIC RESOURCES

http://moodle.btu.kharkiv.ua/course/view.php?id=423

GRADING SYSTEM

SYSTEM		POINTS	ACTIVITY THAT IS ASSESSED
Summative assessment (differentiated test, exam)	**100 ECTS points (standard)**	**to 100**	**40 % - final testing** **60 % - student's current work during the semester**

Section evaluation	**100-point total**	**to 30**	**answers to test questions**
		to 30	**result of mastering the independent work block**
		to 40	**student activity in classes (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 DBTU": to demonstrate discipline, good manners, respect each other's dignity, show kindness, honesty, and responsibility.