

# SYLLABUS OF THE EDUCATIONAL COMPONENT



## CLINICAL DIAGNOSIS OF ANIMAL DISEASES

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

### TEACHER

#### Vikulina Galina Viktorivna



**Higher education – master of veterinary medicine, master of higher education pedagogy, master of philology  
Scientific degree - candidate of veterinary sciences, specialty 16.00.01 - diagnosis and therapy of animals, doctor of philosophy**

**Academic title - associate professor**

**Work experience - 16 years**

**Indicators of professional activity on the subject of the course:**

- author and co-author of about 60 scientific publications;
- co-author of the textbook "Veterinary Clinical Biochemistry" (2010)
- experience of scientific work of 19 years;
- participant of scientific and methodical conferences.

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## GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT (DISCIPLINE)

<b>Aim</b>	is 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
<b>Form</b>	lectures, laboratory classes, independent work, individual tasks.
<b>Detailing of learning results and forms of their control</b>	<ul style="list-style-type: none"> <li>• The task of studying the discipline is based on diagnosis, because treatment and the prevention of any disease is preceded by its recognition, and its staging diagnosis, regardless of the cause of the disease, is carried out guided by the same methods and principles that are outlined in the clinical course diagnostics.</li> <li>• The subject of study of the academic discipline is the necessary theoretical knowledge and practical skills on the technique of obtaining biological material and preparing it for biochemical research, the selection of biochemical indicators and their subsequent interpretation.</li> <li>• Clinical diagnosis, being the basis of other clinical subjects, itself at the same time is based on the foundation of general theoretical ones disciplines - anatomy, physiology, pathological physiology, dialectics, biochemistry, without knowledge of which it is impossible to successfully master this subject.</li> </ul>
<b>Scope and forms of control</b>	10 ECTS credits (300 hours): 30 hours of lectures, 92 hours of laboratory classes; 122 hours of independent work, modular control (8 modules); final control – exam; course work; credit from educational practice.
<b>Requirements of the teacher</b>	timely completion of tasks, activity, teamwork
<b>Enrollment conditions</b>	according to the curriculum

## COMPLEMENTS THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

<b>Competencies</b>	<p>ZK1. Ability to abstract thinking, analysis and synthesis.          ZK2. Ability to apply knowledge in practical situations.          ZK7. Ability to conduct research at an appropriate level.          ZK8. Ability to learn and master modern knowledge.          ZK9. Ability to make informed decisions.</p> <p>FK1. The ability to establish the features of the structure and functioning of cells, tissues, organs, their systems and body apparatuses of animals of various classes and species - mammals, birds, insects (bees), fish and other vertebrates.          FC2. The ability to use tools, special devices, devices, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities.          FK3. The ability to observe the rules of labour protection, asepsis and antiseptics during professional activity.          FK4. The ability to conduct clinical research in order to formulate conclusions about the condition of animals or establish a diagnosis.          FC5. The ability to apply the methods and techniques of patho-anatomical diagnosis of animal diseases to establish the final diagnosis and the causes of their death.          FC6. Ability to select, pack, fix and send samples of biological material for laboratory research.          FC7. Ability to organize and conduct laboratory and special</p>	<b>Program learning outcomes</b>	<p>PRN1. Know and correctly use the terminology of veterinary medicine          PRN4. 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          PRN5. To establish a connection between the clinical manifestations of the disease and the results of laboratory studies</p>
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## STRUCTURE OF THE EDUCATIONAL COMPONENT (DISCIPLINES)

<b>Lecture 1</b>	Clinical diagnostics as a science, its purpose and tasks at the current level of animal husbandry development	<b>LPC 1</b>	Security and personal hygiene in the studied animals	<b>Independent work</b>	<p>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 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 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. The main syndromes in pathology of the digestive system. Reticulitis tests. Classification of colic in horses. Scheme of fecal examination and basic indicators in healthy animals The main syndromes in liver disease. Indicators of urinary frequency and urine output.</p>
<b>Lecture 2</b>	Recognition of the disease and prediction of its course and end	<b>LPC 2-3</b>	Plan and methods of clinical examination of animals		
<b>Lecture 3</b>	Thermometry and fever	<b>LPC 4-5</b>	Definition of animal habitus and skin research		
<b>Lecture 4</b>	Study of the cardiovascular system and its importance in assessing the state of the animal body	<b>LPC 6-7</b>	Examination of visible mucous membranes and lymph nodes		
<b>Lecture 5</b>	Study of heart murmurs	<b>LPC 8-9</b>	Determination of basic physiological parameters in animals		
<b>Lecture 6</b>	Research of respiratory movements and upper respiratory tract	<b>LPC 10</b>	Determining the boundaries of the heart and the study of heartbeat		
<b>Lecture 7</b>	Auscultation of the lungs	<b>LPC 11-12</b>	Examination of heart tones		
<b>Lecture 8</b>	The value of the study of the digestive system	<b>LPC 13-14</b>	Detection of heart murmurs and their diagnostic evaluation		
<b>Lecture 9</b>	Liver examination	<b>LPC 15</b>	Research of arterial pulse and blood vessels		
<b>Lecture 10-11</b>	Clinical significance of the study of urinary organs in animals	<b>LPC 16</b>	Electrocardiography		
<b>Lecture 12</b>	The value of hematological studies in the diagnosis of animal diseases and in assessing the state of natural resistance	<b>LPC 17</b>	Functional diagnosis of the heart		
<b>Lecture 13</b>	Diagnosis of disorders of protein, carbohydrate, lipid, water-electrolyte metabolism	<b>LPC 18</b>	Examination of respiratory movements in animals		
<b>Lecture 14</b>	Tasks and significance of veterinary X-ray diagnostics at the present stage of animal husbandry development	<b>LPC 19-20</b>	Examination of the upper respiratory tract		
<b>Lecture 15</b>	The value of the study of the nervous system as the leading system of the body	<b>LPC 21-22</b>	Examination of the chest and determination of the physical condition of the lungs		
		<b>LPC 23-24</b>	Clinical evaluation of primary and secondary respiratory noises		
		<b>LPC 25</b>	Plegaphony, thoracentesis, sputum examination		
		<b>LPC 26-27</b>	Examination of feed and water intake		
		<b>LPC 28</b>	Examination of rumen and reticulum in		

			ruminants		<p>Features of the study of horse urine.</p> <p>The scheme of the study of urine and the main indicators in healthy animals.</p> <p>The main syndromes of lesions of the urinary system.</p> <p>Physiological properties of blood and their clinical significance.</p> <p>Evaluation of clinical blood test results based on research results</p> <p>Evaluation of indicators of biochemical analysis of blood according to research results.</p> <p>The main clinical syndromes of metabolic diseases.</p> <p>Diagnosis of endocrine pathologies in animals</p> <p>The main properties of X-rays.</p> <p>Types of X-ray machines.</p> <p>Major diseases that require X-ray examination.</p> <p>The main syndromes of diseases of the nervous system.</p> <p>Zones of Zachary, Ged, Roger.</p>
		<b>LPC 29</b>	Research of omasum, abomasum and intestines in ruminants		
		<b>LPC 30-31</b>	Research of stomach and intestines in horses, pigs, dogs		
		<b>LPC 32</b>	Animal intubation		
		<b>LPC 33-34</b>	Liver examination. Rectal examination of animals		
		<b>LPC 35</b>	Examination of the act of defecation and feces		
		<b>LPC 36-37</b>	Examination of the kidneys, ureters, urinary tract and urethra		
		<b>LPC 38</b>	Urine tests		
		<b>LPC 39</b>	Study of the state of the somatic nervous system		
		<b>LPC 40</b>	Study of the state of the autonomic nervous system		
		<b>LPC 41</b>	Determination of ESR, hemoglobin and erythrocytes		
		<b>LPC 42</b>	Determination of the number of leukocytes. Derivation of the leukogram		
		<b>LPC 43-44</b>	Determination of biochemical parameters of blood		
		<b>LPC 45</b>	Radioscopy		
		<b>LPC 46</b>	Radiography		

## BASIC LITERATURE AND METHODOLOGICAL MATERIALS

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. – T. 20. – №. 2. – C. 185-214, v.

Abdisa T. Review on practical guidance of veterinary clinical diagnostic approach //International Journal of Veterinary Science and Research. – 2017. – T. 3. – №. 1. – C. 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. – T. 158. – №. 16. – C. 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. – T. 44. – №. 1. – C. 8-25.

Roudebush P. et al. Application of evidence-based medicine to veterinary clinical nutrition //Journal of the American Veterinary Medical Association. – 2004. – T. 224. – №. 11. – C. 1766-1771.

Robinson N. J. et al. Investigating common clinical presentations in first opinion small animal consultations using direct observation //Veterinary record. – 2015. – T. 176. – №. 18. – C. 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. – T. 225. – №. 1. – C. 46-54.

Hodges B. D. The objective structured clinical examination: three decades of development //Journal of Veterinary Medical Education. – 2006. – T. 33. – №. 4. – C. 571-577.

Hinchcliff K. W., Byrne B. A. Clinical examination of the respiratory system //Veterinary Clinics of North America: Equine Practice. – 1991. – T. 7. – №. 1. – C. 1-26.

## ELECTRONIC RESOURCES

<http://moodle.btu.kharkiv.ua/course/view.php?id=425>

Bellwood, Brianne. Veterinary technician's handbook of laboratory procedures /  
Brianne Bellwood, Melissa Andrasik-Catton, 2014. – 201 p.

## EVALUATION SYSTEM

	System	Score	ACTIVITY TO BE EVALUATED
Final assessment	100 point ECTS (standard)	to 100	50 % - final testing 50 % - current work of the student
Modular assessment	100 points total	to 70	answers to test questions
		to 20	independent work
		to 10	student activity in classes

## 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 prescribed 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.