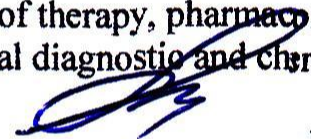


18MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY
DEPARTMENT
OF THERAPY, PHARMACOLOGY, CLINICAL DIAGNOSTIC AND CHEMISTRY

“CONFIRMED”

Chief of therapy, pharmacology,
Clinical diagnostic and chemistry



Ulko L.G.

«08» 05 2020 p.

WORKING PROGRAM

The work program on the subject (SYLLABUS)

"Clinical diagnosis of animal diseases" for students in the direction of running
masters

PP.16 Clinical diagnosis of animal diseases

Specialty: 211 "Veterinary Medicine"

Educational program: "Veterinary Medicine"

Faculty: Veterinary Medicine

2020- 2021 year

Curriculum of Professional Ethics was worked out for the first-year students of training direction 211 "Veterinary Medicine"

Authors:

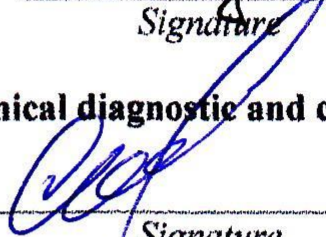
Doctor, Professor of therapy, pharmacology, clinical diagnostic and chemistry
Chair

Shkromada O. I.

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Signature)

Doctor, Professor of therapy, pharmacology, clinical diagnostic and chemistry
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Sklyar O.I.

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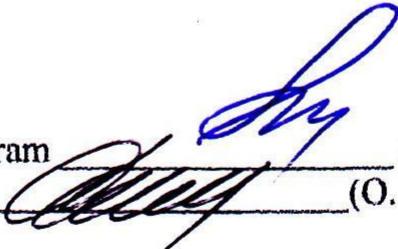
**Curriculum has been approbated on the therapy, pharmacology,
clinical diagnostic and chemistry**

Minutes of " 3 " 05 2019 № 14

Chief of therapy, pharmacology, clinical diagnostic and chemistry
(Doctor, prof. L. G. Ulko)


signature

Coordinated by:

Guarantor of the educational program  (Ulko L.G.)

Dean of the Faculty  (O. L. Nechiporenko)

Methodist of the Department of Education Quality,
licensing and accreditation 

Registered in the electronic database: date: 06.07. 2020

1. THE WORKING PROGRAM OF THE DISCIPLINE

Name	Branch of knowledge, training direction, educational qualification	Characteristics of the discipline	
		full-time education	
The number of credits -3	Industry knowledge: 21 "Veterinary medicine" :	<i>Regulatory (or for choice)</i>	
Modules – 2	Specialty: 211 "Veterinary medicine"	Year:	
Content modules: 2		2020-2021	
Individual research assignment: (if any) (name)		Course	
		2	
		Semester	
All hours - 90		4	
		Lectures	
		16 hours	____ hours.
		Practice, seminars	
		____ hours.	____ hours.
		Lab. lessons	
		30 hours.	-
		Independent work	
		44 hours.	____ hours.
		Independent excersises : ____ hours.	
		Kind of control:	
		standing	

The ratio of classroom hours for independent and individual work is:
for full-time education % (30/45)

2. The updated version of the OP is being tested and reviewed at the meeting of the Department Protocol № 14 of 05.2020.

The purpose and objectives of the discipline

The purpose of the discipline is that the students have mastered theoretical and practical knowledge and skills of clinical, instrumental and laboratory research method of animals, equipment and the sequence of their application in the study of individual organs and systems and learn to analyze the identified symptoms and signs, which are the main ways of recognition of the disease.

Objective: learn to use common clinical and special methods of research animals.

As a result of studying of discipline the student should:

know: the purpose and objectives of clinical diagnostics General and special methods of research of agricultural animals; a scheme for clinical animal research; scheme and methods of investigation of cardiovascular system, the respiratory system. Definition of conduct, Constitution, structure of the body; have the theoretical knowledge to organs of the nervous system (skull and spine, CSF), urinary system (kidneys, bladder, ureters, urethra), digestive system, blood system and metabolism; to have the theoretical knowledge and methods for its study.

be able to: identify the symptoms, syndromes, diseases, prognosis and diagnosis; the use of special and General methods of clinical research in the examination of animals according to the scheme of the clinical trial; to determine the cardiac impulse, heart rate, arterial and venous pressure, heart disease, arrhythmias, heart outside a heart murmur, points of best sensitivity of the heart valves, to determine the patient animal a complex of symptoms of heart failure (cyanosis of the mucous membranes and skin, shortness of breath, swelling); be able to identify signs of myocarditis, pericarditis, endocarditis, mocardis, myocardiosclerosis, the use of the electrocardiograph and decode the received electrocardiogram. To determine the boundaries and location of the gastrointestinal tract (stomach, rumen, mesh, books, and abomasum of the ruminant, intestine, liver, to investigate the functional capabilities of the bodies to calculate the amount of reduction of the scar, examining the contents of rumen and abomasum of ruminants, to explore the act of defecation, rectal examination, external palpation of the intestine; in the study of the nervous system using inspection, palpation of the skull and spine, research usaro-touch reflex, to determine the autonomic nervous system, pain and place of their origin, disorders in the behavior of animals; in the study of the urinary system to apply inspection, palpation, catheterization, conduct laboratory studies of physical and biochemical urine; to be able to use the equipment (centrifuge, microscope, colorimeter, Refractometer) and devices (stethoscope, phonendoscope, a hammer with plasmatron, sunice) for the study animals; to take the blood of the animal to explore the physical and biochemical properties of blood.

2. Discipline program

Approved by the Department research and educational support of APV and rural development of the Ministry of agrarian policy and food of Ukraine on 18 Oct 2011
Theoretical classes

Module 1.

GENERAL DIAGNOSIS.

1.1. Methods of clinical pet research

Classification of research methods. Characteristics of the main methods (inspection, palpation, percussion, auscultation), the history of their development and formation and diagnostic significance.

1.2. The study of the General condition of the animal

The study of habitus, hair, skin, and subcutaneous tissue. The study of the visible mucous membranes, superficial lymph nodes.

1.3. Symptoms and syndromes of diseases. Diagnosis. Forecast.

The definition of symptoms and syndromes of diseases during assessment of the patient animal. The determination of the diagnosis. Types of diagnosis. A method of constructing a diagnosis. Determining the prognosis of the disease, types of forecast. Diagnostic errors doctor of veterinary medicine.

Module 2.

THE STUDY OF THE CARDIOVASCULAR SYSTEM

2.1. Basic research methods of the heart.

Importance of the study of the cardiovascular system. Scheme of the study. Palpation of area of heart. Auscultation of the heart. The origin of the tones and their difference. Changes in the heart tones.

2.2. The heart murmur.

Definition of heart murmurs. Classification of heart murmurs. Feature endocardial noise (origin, causes, methods of diagnosis). Feature incomediary noise (origin, causes, differential diagnosis).

2.3. Electrocardiography

Theoretical basis of electrocardiography. The analysis of the electrocardiogram. Clinical significance of electrocardiography to detect animal diseases.

2.4. The study of arteries and veins. Arrhythmias of the heart.

The study of arteries and veins. Measurement of arterial blood pressure.

Definition and classification of arrhythmias. Arrhythmia on the basis of violations of the functions of automatism and excitability. Arrhythmias arising as a result of violations of function of conductivity and reduction of the myocardium.

A STUDY OF THE RESPIRATORY SYSTEM STUDY OF THE BLOOD SYSTEM

3.1. Value, design, and research methods respiratory system

The value and outline of the study of the respiratory system. A study of the respiratory movements. Shortness of breath. Examination of the upper respiratory tract. Cough, its characteristics and clinical assessment.

3.2. Examination of the upper respiratory tract and thorax

Percussion of the chest. Changes of percussion borders and percussing sound in case of diseases of lung and pleura.

3.3. Auscultation of the lungs

Classification of the respiratory tract. Physiological respiratory sounds and their changes. Pathological respiratory sounds and their clinical evaluation.

3.4. The study of the blood system

Diagnostic value of determining hematocrite size and the refraction of a blood clot. Buffer systems of the body. Indicators of acid-base balance. Acidosis and alkalosis, its types and causes. Hemoglobin, changes its amount, causes. Total protein and protein fractions and their changes and pathology. Total calcium, inorganic phosphorus, changes in their number and main causes of pathologies. Metabolism of bilirubin and its violation.

3.5. Study of the morphological composition of the blood and immune system

Study of the morphological composition of the blood. Changes in the number of red blood cells. Leukocytosis and radiation, their diagnostic and prognostic value. Humoral and cellular factors of nonspecific resistance. Immune deficits.

3. INDEPENDENT WORK OF STUDENTS

On the basis of analytical review of literature sources and information training sessions and scientifically proven to give your vision the following questions:

Module 1. GENERAL DIAGNOSIS

1.1. Thermometry and its importance in veterinary diagnostics. Fever [1*, S. 21-27], [5, p. 18, 61-66].

1.2. Especially the study of small animals: advanced introduction, study of the General condition [1, p. 538-545], [10, pp. 11-12].

1.3. Studies of birds. History. Content analysis and feeding birds. General study of birds [1, p. 581-597], [3, p. 331-334].

Module 2. THE STUDY OF THE CARDIOVASCULAR SYSTEM

2.1. Anatomical features of cardiovascular system in animals. Phase of the heart [1, p. 130-137], [5, pp. 69-71].

2.2. Special methods of investigation of cardiovascular system. [1, p. 133-150], [5, p. 80-94].

2.3. Laboratory methods for diagnosis of heart diseases [1, p. 165-167], [17 sec. 302-303].

2.4. The main syndromes cardiovascular failure [1, p. 167-174], [4, p. 136-140], [5, p. 105-109].

Module 3. A STUDY OF THE RESPIRATORY SYSTEM STUDY OF THE BLOOD SYSTEM

3.1. Additional methods of research of the respiratory system [1, p. 208-217], [5, p. 140-143].

3.2. Laboratory methods for diagnosis of diseases of the respiratory system (the study of blood, pleural fluid and sputum) [1, p. 213 to 217], [8, p. 280-288].

3.3. The basic syndromes of defeat of respiratory organs [1, pp. 218-219].

3.4. The study of individual systems in small animals (cardiovascular and respiratory) [1, p. 545-552], [6, p. 258-277].

Hemopoiesis: red and leukocytes in farm animals. [9, p. 23-26].

The study of phagocytosis [1, p. 456-472], [5, pp. 294-301].

3.5. The main syndromes of diseases of the blood system [1, p. 452-455].

Counting the number of platelets and pathological changes of blood cells [1, p. 448-449], [5, p. 292-293].

Counting the number of blood cells in poultry [5, p. 293].

4. The structure of discipline

Name of tems	Number of hours					
	Day education form					
	All	with				
L		P	Lab	Anoth er	Indep. work	
1	2	3	4	5	6	7
Module 1. General diagnosis						
Topic 1. Methods of clinical pet research	11	2		4		5
Theme 2. The study of the General condition of the animals.	11	2		4		5
Theme 3. Symptoms and syndromes of diseases. Diagnosis. Forecast.	16	2		6		10
Total for semantic module 1	38	6		14		20
Module 2 the Study of organs and systems						
Theme 2.1. Basic research methods heart	8	2		2		4
Theme 2.2 heart Murmurs	10	2		2		2
Theme 2.3 Electrocardiography of the heart	12	2		2		4
Topic 2.4 the Study of arteries and veins. Arrhythmia	12	2		4		4
Topic 2.5. Value, investigation methods of respiratory system examination of the upper respiratory tract and thorax	16	2		2		6
Topic 2.6. Study of the morphological composition of the blood and immune system	8	2		4		4
Total for semantic module 2	52	10		16		24
Total hours	90	16		30		44

5. Topics and plan of lectures

№ п/п	Name of theme	Total hours
1	2	3
	Module 1	
1	Lecture 1: General diagnosis. The concept of clinical diagnosis The plan: Purpose and objectives. Methods of clinical research	2
2	Lecture 2: Study of the general condition of the animal The plan: A clinical study. Preliminary acquaintance with the sick animal. Definition of habitus.	2
3	Lecture 3: Stages of disease recognition. The plan: Symptoms and Syndromes of Diseases. Diagnosis. Forecast. History of the disease	2
	Module 2	
4	Lecture 4: Basic heart research methods. Noise of the heart. The plan: Look, palpation, percussion, auscultation.	2
5	Lecture 5: Electrocardiography of the heart The plan: Electrocardiography. Ultrasound.	2
6	Lecture 6: Examination of the upper respiratory tract and chest. The plan: Review. Palpation. Percussion of the chest.	2
7	Lecture 7. Investigation of the upper respiratory tract and thoracic cavity. The plan: Review, palpation, percussion of the chest.	2
8	Lecture 8: Theme 8: Study of the morphological composition of the blood and immune system. The plan. Study of the morphological composition of the blood. Counting the number of erythrocytes, leukocytes, platelets.	2
All:		16

5. Themes of laboratory classes

№№ п/п	The title of the topic	Total hours
1	2	3
Module 1		
1.	Theme 1: Explore safety techniques when working with animals. The plan: Study the rules of animal studies.	2
2.	Theme 1: Methods of clinical study of animals. The plan: Review, palpation, percussion, auscultation.	2
3.	Theme 3. Measurement of body temperature. The plan: Fever.	2
4.	Theme 4. Investigation of general condition. The plan: Habitus.	2
5.	Theme 5. Investigation of the skin The plan: Investigation of haircuts. Investigation of feathers in birds.	2
6.	Theme 6. Special research methods. The plan: X-ray, tomography, ultrasound	2
7	Theme 7. Scheme of clinical study of animals. The plan: Anamnesis. History of illness.	2
Module 2		
8.	Theme 8. The main methods of heart research. The plan: Review, palpation, percussion, auscultation.	2
9.	Theme 9. Arrhythmias of the heart. The plan: Study of animals with arrhythmias.	2
10.	Theme 10. Electrocardiography. The plan: Investigation of sick animals	2
11.	Theme 11. Blood vessel examination. The plan: Pulse	2
12.	Theme 12. Diagnosis of cardiovascular diseases. Blood tests. The plan: Viral and bacteriological studies.	2
13.	Theme 13. The main methods of thorax research. The plan: Review, palpation, percussion, auscultation.	2
14.	Theme 14. Intrinsic (Normal) Respiratory Sounds. Adventitious (Abnormal) Respiratory Sounds The plan: The vesicular respiratory sound. Bronchial respiratory sound.	2
15.	Theme 15. Special Methods for Examination of the Thoracic Respiratory Organs. The plan: Radiological Examination. Paracentesis	2
All:		30

6. Independent work

№ п/п	The title of the topic	Total hours
1.	Theme 1. Diseases of the Blood Vessels. The plan: Parasitic arthritis. Infection.	5
2.	Theme 2. Blood Pressure The plan: Two methods are available.	5
3.	Theme 3. Radiological Examination of the Heart The plan: Fluoroscopy. Radiographs.	10
4.	Theme 4. Phonocardiography The plan: Animal studies	6
5.	Theme 5. Special methods of studying animals with pathology of the respiratory system. X-ray examination for diseases of the lungs and pleura. Mastering special methods of studying animals for diseases of the respiratory system (X-ray,). Investigation of the respiratory system. Investigation of the anterior respiratory tract. Research of lungs.	6
6.	Theme 6. Special propedeutics for metabolic pathology.	12
All:		44

7. Teaching methods

1. Teaching methods the source of knowledge:

- 1.1. Verbal: story, explanation, work with a book (reading, summaries, taking notes, making tables, reference notes, etc.).
- 1.2. Visual: demonstration, illustration and observation.
- 1.3. Practical: laboratory method practical work.

2. Teaching methods by the nature of the logic of knowledge.

- 2.1. Analytical
- 2.2. The inductive method
- 2.3. The deductive method

3. Methods of training on the nature and level of independent cognitive activity of students.

- 3.1. Partial search (heuristic)
- 3.2. Research

4. Active learning methods - use of technical training, tours, group research, self-knowledge, the use of training and supervising tests, the use of reference lecture notes.

5. Interactive learning technologies - the use of multimedia technologies.

8. Control methods

1. Rating control on a 100-point scale ECTS
2. An interim control during the semester (interim assessment)
3. Polchatelya assessment of the current work of students:
 - the level of knowledge demonstrated on practical, laboratory and seminar classes;
 - activity in the discussion of issues raised during the lesson;
 - the results of the implementation and defense of laboratory works;
 - an independent study of the subject in General or particular issues;
 - the results of the testing;
 - writing assignments at carrying out of control works;

9. The distribution of points that students receive (offset)

Routine testing and independent work										S R S	Together r the modules and SRS	Atestat ion	All
Module 1 - 35 points			Module 2 -35 points		Module 3 - __ points		Module 4 ___ points						
T1	T 2	T 3	T4	T5	T6	T7	T8	T 9	Tn	15	85 (70+15)	15	100
15	10	10	25	10									

Grading scale: national and ECTS

Total points	Mark	The rating on the national scale	
		for examination, course project (work) practices	to offset
90 – 100	A	Excellent	read
82-89	B	Good	
75-81	C		
69-74	D	satisfactory	
60-68	E		
35-59	FX	unsatisfactory with option to re-compile	not credited with the possibility of re-Assembly
1-34	F	unsatisfactorily with the mandatory repeated study of the discipline	not credited with a mandatory repeated study of the discipline

10. Suggested Reading

Base:

1. W. R. Kelly Veterinary clinical diagnosis Bailliere Tindall., 1986, 473 p. – електронний варіант (<https://books.google.com.ua/books?id>)
2. Peter G.G. Jackson, Peter D. Cockcroft Clinical Examination of Farm Animals 2002, 321 p.
3. Otto M. Radostits , I.G. Mayhew , Doreen M. Houston Veterinary Clinical Examination and Diagnosis London, United Kingdom. 2000, 800 p.
4. Mccurnin D. M., Bassert J.M. Clinical textbook for veterinary technicians, Elsevier Inc. 2006, 1274 p.
5. Ballard B, Rockett J (2009) Restraint and Handling for Veterinary Technician and Assistants. Delmar, Cengage Learning, USA.
6. Frandson RD, Wilke WL, Fails AD (2009) Anatomy and Physiology of Farm Animals. 7thedn. Wiley-Blackwell, USA.
7. Jackson P, Cockcroft P (2002) Clinical Examination of Farm Animals. Blackwell Science, UK.
8. Kahn CM (2010) Merck Veterinary Manual. 10thedn. Whitehouse Station, Merck, NJ, USA.
9. Kelly WR (1974) Veterinary Clinical Diagnosis. 2ndedn. Bailliere Tindal & Casell, London, UK.
10. Radostits OM, Gay CC, Hinchcliff KW, Constable PD (2007) Veterinary Medicine: A textbook of the diseases of cattle, sheep, pigs and goats, horses. 10th edn. St. Louis: Saunders (Elsevier).
11. Riviere JE, Papich MG (2001) Veterinary Pharmacology & Therapeutics. 9thedn. Wiley-Blackwell, USA.
12. Chauhan RS, Agarwal DK (2008) Textbook of Veterinary, Clinical and Laboratory Diagnosis. 2ndedn. Jaypee Publishers, New Delhi, India.
13. Free Online Library: Clinical Diagnosis and Management by Laboratory Methods, 20th ed. by "Clinical Chemistry";
14. Free Online Library: Facial aesthetics; concepts & clinical diagnosis.(Brief article, Book review) by "Reference & Research Book News"; Publishing industry

11. Supportive

№ s / n	Name of materials	Number	Carrier s	
			paper.	elect.
1	Guidance as to independent work on discipline "PP.13 Herbs" for students towards the preparation 11,010,101 6. Veterinary Medicine full-time Bachelor "bachelor" [Shkromada OI Ulko LG] - Sumy, 2015. - S. 30.	10	10	+
2	Guidance that the laboratory work on discipline "PP.13 Herbs" for students towards the preparation 11,010,101 6. Veterinary Medicine full-time Bachelor "bachelor" [Shkromada OI Ulko LG] - Sumy, 2015. - S. 32.	10	10	+
3	Lectures on the subject "PP.13 Herbs" for students towards the preparation 11,010,101 6. Veterinary Medicine full-time Bachelor "bachelor" [Shkromada OI Ulko LG] - Sumy, 2015. - P. 32.	10	10	+
12	Educational slides	20		
13	Audios	2		
14	Thematic folders	2		