MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY
Faculty of Veterinary Medicine
Department of Therapy, Pharmacology, Clinical Diagnostics and Chemistry

MODULE SYLLABUS

Clinical diagnosis of animal diseases

_ required __

Implemented in the "Veterinary Medicine" Academic Program
Area of specialization 211 " Veterinary Medicine"
at the second (master 's) level of higher education

Sumy- 2022

Considered, approved and approved at the meeting of the department therapy, pharmacology, clinical diagnosis and chemistry	protocol from 08.06.2021р № 15
	The head departments LG Ulko

Approved by:

Guarantor of the Academic program _____ (L. Ulko)

Dean of the Faculty _____(O. Nechyporenko)

Work program review (attached) provided: Bezhanovska R.V.

Shkromada O.J.

Methodist of the Department of Education Quality, licensing and accreditation _____ (Balashyna Y.O.)
(signature) (Full name)

Registered in the electronic database: date: 21.02 2021

Syllabus review data:

Academic year in which changes are made	The number of the application to the work program with a description of the changes	The changes have been reviewed and approved		
		Date and number of the minutes of the meeting of the department	Head of Department	Guarantor of the educational program

1. MODULE OVERVIEW

<table>
<tr><td>1.</td><td>Name OK</td><td colspan="4">OK 26. Clinical diagnosis of animal diseases</td></tr>
<tr><td>2.</td><td>Faculty / department</td><td colspan="4">Veterinary medicine / therapy, pharmacology, clinical diagnostics and chemistry</td></tr>
<tr><td>3.</td><td>Status OK</td><td colspan="4">Obligatory</td></tr>
<tr><td>4.</td><td>Program / Specialty (programs), the component of which is OK for (to be filled in for mandatory OK)</td><td colspan="4">Veterinary medicine / 211 Veterinary medicine</td></tr>
<tr><td>5.</td><td>OK can be suggested for (to be filled in for selective OK)</td><td colspan="4">-</td></tr>
<tr><td>6.</td><td>NRC level</td><td colspan="4">NRC of Ukraine - level 7, QF-EHEA - second cycle, EQF-LLL - level 7</td></tr>
<tr><td>7.</td><td>Semester and duration of study</td><td colspan="4">5 semester, 15 weeks</td></tr>
<tr><td>8.</td><td>Number of ECTS credits</td><td colspan="4">3.0</td></tr>
<tr><td rowspan="3">9.</td><td rowspan="3">The total number of hours and their distribution</td><td colspan="3">Contact work (classes)</td><td>Individual work</td></tr>
<tr><td>Lectures</td><td>Practical / seminar</td><td>Laboratory</td><td></td></tr>
<tr><td>14
(4)</td><td></td><td>30
(6)</td><td>46
(80)</td></tr>
<tr><td>10.</td><td>Language of instruction</td><td colspan="4">English</td></tr>
<tr><td>11.</td><td>Teacher / Coordinator of the educational component</td><td colspan="4">Alexander Ivanovich Sklyar</td></tr>
<tr><td>11.1</td><td>Contact Information</td><td colspan="4">mob. tel. +380952589561, e-mail-sklyar1956@gmail.com</td></tr>
<tr><td>12.</td><td>General description of the educational component</td><td colspan="4">«Clinical diagnosis of animal diseases "is one of the profile clinical disciplines that form a veterinarian. It teaches the principles of recognizing animal diseases and is a methodological basis of clinical veterinary medicine. For effective treatment of animals, disease prediction requires the ability to recognize diseases, group them into pathogenetically related symptom complexes and on this basis to draw a conclusion - to establish a diagnosis. All clinical disciplines are based on diagnosis.
Methods of clinical examination are used in the diagnosis of diseases of different etiology - internal, surgical, gynecological, infectious, parasitic. The importance of discipline for the formation of a veterinarian is growing with the introduction of specialization of farms, the use of the latest technologies for keeping and feeding productive animals and increasing the number of pets.</td></tr>
<tr><td>13.</td><td>The purpose of the educational component</td><td colspan="4">The purpose of the educational component is to form in students the ability to use methods of clinical and laboratory research of animals of different species, in order to make generalizations about the nature of the disease.</td></tr>
<tr><td>14.</td><td>Prerequisites for studying OK, the relationship with other educational components of OP</td><td colspan="4">1. The educational component, being the basis for clinical subjects, is based on the foundation of general theoretical disciplines: anatomy, physiology, pathological physiology, dialectics, physics, chemistry, without the knowledge of which it is impossible to successfully master this subject.</td></tr>
</table>

		2. The educational component is the basis for internal non-communicable diseases, obstetrics, surgery, epizootology, parasitology
15.	The policy of academic integrity	Assimilation of OK in compliance with academic integrity, plagiarism is prohibited. In case of violation of these requirements, it is proposed to repeat the assessment (test, exam, test, etc.), in case of repeated violation.The use of electronic devices during the final control of knowledge - removal from work, re-passing the final control. In case of participation in any other activity connected with violation of rules and norms of academic integrity - repeated studying of OK.
16.	Course link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=300 https://cdn.snau.edu.ua/moodle/course/view.php?id=2259

2. CORRELATION BETWEEN MODULE LEARNING OUTCOMES (MLOs) AND PROGRAM LEARNING OUTCOMES (PLOs)

MLOs: On successful completion of the module the learner will be able to:	As estimated by RND					
	PLOs 1	PLOs 2	PLOs 4	PLOs 5	PLOs 6	
DRN 1. Distinguish the concept of symptom, prognosis, diagnosis, syndrome. Fix animals. Apply the scheme of clinical research of animals. Carry out registration and collection of anamnesis. Analyze the obtained results Understand the significance of the results of animal registration and history taking Use the obtained data for further clinical studies of animals.	+	+				– Thematic survey – Working with animals – Solving situational problems – Registration of the synopsis on independent work
DRN 2. To substantiate the occurrence of heart murmurs, their diagnosis and differential features. Distinguish heart murmurs in different species of animals. Diagnose heart defects. Analyze the results. Conduct ECG, ultrasound (ECHO-CG) and X-ray diagnosis of the heart in different species of animals. Analyze the results. Distinguish the norm and pathology of the results obtained in different species of animals. Diagnose and analyze different types of arrhythmias Understand and decipher ECG results in animals with arrhythmias	+	+	+	+	+	– Thematic survey – Working with animals – Solving situational problems – Registration of the synopsis on independent work
DRN 3. To conduct research of the upper respiratory tract in different species of animals. Analyze the results of the study of the upper respiratory tract in different species of animals. Understand the norm and pathology of the upper respiratory tract in different species of animals. Use general and special methods to study the upper respiratory tract. Master the method of X-	+	+	+	+		– Thematic survey – Working with animals – Solving situational problems – Registration of the synopsis on independent work

ray examination of the respiratory system. Analyze the identified changes in the respiratory system of animals. To understand the results obtained as a result of auscultation and X-ray examination of the respiratory system. Distinguish between physiological and pathological respiratory noises.						
DRN 4. Use the technique of sounding different species of animals. Analyze the identified changes in the digestive system of animals. Investigate the act of taking food and water from animals and birds; oral cavity, pharynx, esophagus, poultry; perform an external examination and palpation of the abdomen. Conduct sounding of different species of animals. Understand the results of a clinical study of the oral cavity, pharynx, esophagus, ox and scar. Distinguish norm and pathology at clinical research digestive system. Use clinical methods of examination of the oral cavity of the pharynx, esophagus, ox, scar when assessing the state of the digestive system	+	+	+	+	+	− Thematic survey − Working with animals − Solving situational problems − Registration of the synopsis on independent work − solving tests
DRN 5. Use general and special methods of studying the nervous system of animals. Interpret the features and methods of studying the behavior of animals, skull and spine, sense organs in animals. Analyze revealed changes in the study of the nervous system of animals, in particular the behavior of animals Distinguish norm and pathology of the nervous system of animals, in particular the behavior of animals, skull, spine, sense organs Use obtained data in the interpretation of the results of clinical trials of animals	+	+	+	+		− Thematic survey − Working with animals − Solving situational problems − Registration of the synopsis on independent work
DRN 6. Diagnose disorders of protein metabolism, carbohydrate metabolism, lipid metabolism. Distinguish between disorders of vitamin metabolism and disorders of water-ion metabolism. Analyze the state of water-electrolyte metabolism. Use methods for diagnosing disorders of metabolism of macro-and micronutrients and vitamins.	+	+		+	+	− Thematic survey − Working with animals − Solving situational problems − Registration of the synopsis on independent work

3. CONTENT OF THE EDUCATIONAL COMPONENT (PROGRAM OF THE COURSE)

Topic. List of issues to be addressed within the topic	Distribution within the general budget of time				Recommended Books[1]
	Classroom work			Individual work	
	Luke	P.z / semin. with	Lab. with.		
Topic 1.General diagnostics. Study of the general condition of the animal The concept of clinical diagnosis Purpose and objectives. Methods of clinical research. Scheme of clinical research. Preliminary acquaintance with a sick animal. Determination of habit.	2		4	6	[1, 7, 14, 19, 22]
Topic 2. Stages of disease recognition. Basic methods of heart research. Special methods of heart research. Examination of the upper respiratory tract. Symptoms and syndromes of diseases. Diagnosis. Forecast. Medical history Examination, auscultation, palpation, percussion of the heart. Electrocardiography. Ultrasound. Radiography Examination, palpation, percussion of the chest	2		4	6	[1, 10, 12, 14, 20, 27]
Topic 3. Auscultation of the lungs. Special methods of lung research Physiological and pathological respiration. The main syndromes in the defeat of the respiratory system. Physiological and pathological respiration. The main syndromes in the defeat of the respiratory system. Fluorography, radiography, ultrasound, puncture	2		4	6	[2, 9, 13, 21, 23, 28]
Topic 4. Digestive system. Study of the stomach in animals. The value of the study and the main diseases of the digestive system. Research scheme. Examination of the mouth and organs of the oral cavity, pharynx and esophagus in animals. Study of the stomach of monogastric and polygastric animals. Examination of gastric contents.	2		4	8	[1, 8, 16, 18, 25]
Topic 5. Syndrome and pathology of the digestive system. Significance and major liver diseases. Pancreatic dystonia, maldigestion, gastrointestinal colic. Scheme of liver examination. Basic methods of liver research.	2		4	6	[1, 8, 16, 18]
Topic 6. Urinary system. Nervous system The value of the study of the urinary system. Major diseases of the urinary system. Research scheme. Disorders of urination and urination. Syndromes of pathology of the urinary system. Research on animal behavior. The main syndromes of the nervous system.	2		6	8	[2, 4, 12, 14, 18, 25]
Topic 7. Diagnosis of metabolic disorders.	2		4	6	[1, 3, 9, 15, 16,

[1] Specific source from the main or additional recommended literature

Methods for diagnosing disorders of protein, carbohydrate and lipid metabolism. Assessment of water-electrolyte metabolism. Methods of diagnosis of disorders of metabolism of macro- and microelements, and vitamins					18, 22]

4. METHODS OF TEACHING AND TEACHING

DRN	**Teaching methods** (work to be carried out by the teacher during classes, consultations)	**Number of hours**	**Teaching methods** (what types of educational activities the student must perform independently)	Number of hours
DRN 1	Thematic survey during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work. Work with animals / biological materials, in a group of 2-3 students	6	Solving situational tasks (orally: registration and collection of anamnesis, use of the obtained data for further research of animals). Registration of the synopsis on independent work	6
DRN 2	Thematic survey during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work. Work with animals / biological materials, in a group of 2-3 students	6	Solving situational tasks (orally: registration and collection of anamnesis, use of the obtained data for further research of animals). Registration of the synopsis on independent work	6
DRN 3	Thematic survey during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work. Work with animals / biological materials, in a group of 2-3 students	8	Solving situational tasks (orally: registration and collection of anamnesis, use of the obtained data for further research of animals). Registration of the synopsis on independent work	8
DRN 4	Thematic survey during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work. Work with animals / biological materials, in a group of 2-3 students	8	Solving situational tasks (orally: registration and collection of anamnesis, use of the obtained data for further research of animals). Registration of the synopsis on independent work	10
DRN 5	Thematic survey during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work. Work with animals / biological materials, in a group of 2-3 students	10	Solving situational tasks (orally: registration and collection of anamnesis, use of the obtained data for further research of animals). Registration of the synopsis on independent work	10
DRN 6	Thematic survey during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work. Work with animals / biological materials, in a group of 2-3 students	6	Solving situational tasks (orally: registration and collection of anamnesis, use of the obtained data for further research of animals). Registration of the synopsis on independent work	6

NOTE. Features of performing an independent component of the discipline. The level of mastering the topics intended for independent study of the student is assessed during the defense of the synopsis of independent work, during the thematic survey in the laboratory and the solution of individual situational problems.

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

№	Methods of summative evaluation	Points / Weight in the overall score	Date of compilation
1.	Thematic survey	*20 points / 20%*	Weekly
2.	Working with animals	*10 points / 10%*	According to the schedule of the hospital
3.	Solving situational problems	*10 points / 10%*	According to the schedule
4.	Protection of the abstract from independent work	*15 points / 15%*	According to the schedule of delivery of modules
5.	Multiple choice tests	*15 points / 15%*	According to the schedule

5.2.2. Grading criteria

Component[2]	**Unsatisfactorily**	**Satisfactorily**	**Okay**	**Perfectly**[3]
	<12 points	*12-15*	*15-18 points*	*20 points*
Thematic survey	The student can play only individual fragments of the course.	The student has certain knowledge provided in the program of the discipline, has the basic provisions studied at a level that is defined as the minimum allowable	The student in general is well versed in the material, knows the basic provisions of the material, makes an analysis of possible situations based on them and is able to apply in solving typical practical problems, but admits some inaccuracies	The student demonstrates complete and solid knowledge of the educational material in the amount that corresponds to the program of the discipline, correctly and reasonably makes the necessary decisions in various non-standard situations.
	<2 points	*2-5*	*5-8 points*	*10 points*
Working with animals	Task requirements not met	Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	All the requirements of the task are met, but in violation of the methods	The task is performed methodically correctly and qualitatively. The student is able to implement the theoretical provisions of the discipline in practice
Solving situational problems	The student is not prepared to solve problems, the answer is	Using the basic theoretical provisions, the student has	The student has mastered the basic material, and understands the	The correct answer. When performing

[2] Indicate the component of summative assessment

[3] Indicate the distribution of points and the criteria that determine the level of evaluation

	incomplete, some components are missing or insufficient to disclose	difficulty performing the task. Tasks are significantly formalized: there is a correspondence of the algorithm, but there is no deep understanding of the work	solution of problems, has suggestions on the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar problems with those discussed with the teacher, but allows a small number of inaccuracies	tasks, he showed the ability to solve tasks independently
	<5 points	*5-8*	*8-14 points*	*15 points*
Protection of the abstract from independent work	The integrity of the student's understanding of the material on the discipline is lacking. The student is not prepared to independently solve problems that outline the purpose and objectives of the discipline	Despite the fact that the student completed the program of the discipline, he worked passively, his answers during the registration of works are mostly incorrect, unfounded	Knows the characteristics of the main provisions that are crucial in performance of registration of tasks and explanation of the accepted decisions, within the discipline studied. Errors in the answers are not systemic.	When performing tasks, he showed the ability to solve tasks independently. The synopsis is designed flawlessly, logically arranged material with an understanding of the relationships of the processes disclosed on this topic.
Multiple choice tests	25% correct answers	50% correct answers	75% correct answers	100% correct answers

5.1.Formative assessment:

To assess current progress in learning and understanding areas for further improvement

№	Elements of formative assessment	Date
1	Oral examination during laboratory (concept of symptom, prognosis, diagnosis, syndrome, fixation of animals, methods of laboratory work)	During the lesson
2	Oral feedback from the teacher while working on thesolution of situational tasks (orally: registration and collection of anamnesis, use of the received data for the further research of animals) during employment	During the lesson
3	Written feedback from the teacher after checking the synopsis with independent study of the discipline	Within a week, after execution

Self-assessment can be used as an element of summative assessment and formative assessment.

6. LEARNING RESOURCES

6.1. 1. Key resources

1. Clinical diagnosis of animal diseases: a textbook / VI Levchenko, VV Vlizlo, IP Kondrakhin, VI Головаха, Д.В. Morozenko and others. Bila Tserkva: BNAU, 2017. 544 p.
2. Morozenko DV, Tymoshenko OP. Research of urine of dogs and cats in diagnostics of internal diseases: textbook: Kharkiv: PPV "New word", 2012. 106 p.

3. Clinical evaluation of the results of biochemical examination of animal blood / DV Kibkalo, D.V. Морозенко, O.П. Tymoshenko [etc.]. Kharkiv: FOP Brovin OV , 2017. 148 p.
3. Tumanskaya NV, Barskaya KS, Skrynchenko SV X-ray research methods: a textbook for students: Zaporozhye: ZSMU, 2016. 82 p.
5. Milka VI X-ray diagnostics. Vinnytsia: New book, 2005. 352p.
6. Vinogradova TA Clinical pulmonology. - Гродно: ГрГМУ, 2011. - 192 с.

6.1.2. Methodical support

6. Sklyar OI, Shkromada OI Study of the nervous system in farm animals Sumy 2006 36 p.
7. Sklyar OI, Shkromada OI Study of peripheral vessels in farm animals Sumy 2006 25 p.
8. Sklyar OI, Shkromada OI General diagnostics of Sumy 2005 36p.
9. Sklyar OI, Shkromada OI Studies of the respiratory system of animals. Sumy 2001 36 p
10. Animal blood tests and clinical interpretation of the results. Methodical recommendations / [Levchenko VI, Sokolyuk VM, Bezukh VM etc.]. - Bila Tserkva, 2002. - 56 p.
11. Urine examination. Methodical recommendations / [Levchenko VI, Tyshkivsky M.Ya., Sakhnyuk VV etc.]. - Bila Tserkva, 2005. - 74 p.
12. Lokes P.I. Study of feces in dogs and cats. Methodical instructions / Lokes PI, Kurman AF, Kirdan SV - Poltava, 2002. - 42 p.
13. Lokes P.I. Examination of urine in dogs and cats. Methodical instructions / Lokes PI, Kurman AF - Poltava, 2002. - 50 p.
14. Methodical instructions on the use of biochemical studies of biological material in state laboratories of veterinary medicine in the diagnosis of diseases of infectious pathology / Yu.M. Novozhytska, DP Кучерюк, O.B. Dove; Min. agr. Policy of Ukraine, Gos. dep. vet. honey. Of Ukraine. - Kyiv, 2000. - 85 p.
15. Syndromes of the most common internal non-communicable diseases of animals. Methodical instructions / [Tsvilikhovsky MI, Sudakov MO, Chumachenko V.Yu. etc.]. - K., 2000. - 32 p.

6.1.3. Other sources

17. http://zoolife.rv.ua
18. https://studfiles.net
19. http://tvarunu.com.ua/tsikave/130/144/
20. http://ukranimals.ru
21. http://medbib.in.ua

6.2. Additional sources

22. Workshop on clinical diagnosis of animal diseases to laboratory classes and independent work of students / [NO. Suslova, P.P. Antonenko, P.M. Sklyarov and others.] // Dnipropetrovsk State Agrarian University, Department of Clinical Diagnostics and Internal Diseases of Animals - Dnipropetrovsk: DSAU Publishing House, 2013. - 274 p.
23. Antonenko PP Medicinal plants in animal husbandry; textbook / N.I. Suslova, VO Postoenko (etc.) Kherson Oldie-Plus, 2014, 424p.
24. Lokes. P.I. Medicinal plants. Textbook / P.I. Lokes, I.S. Postoenko. Poltava: Environment.- K., 2010.- 264 p.
25. Lokes P.I. basics of veterinary formulation and technology of dosage forms: textbook. manual./ P.P. Shekhtakhin, TP Lokes - Krupka, NS Kanivets - Poktava, FOP Tovarov SV 2014.- 152 p.
26. Yevushenko MD Maryutin FM, Turenko VP tv etc., Phyto - pharmacology / textbook MD Yevtushenko, FM Martin, VP, VP Turenko.Higher education, -K .:, 2004.- 432p.
27. Kozachok VS Clinical study of exotic animals: Textbook / V.S. Козачок, O.O. Skiba, MI Tsvilikhovsky. - K .: Арістей, 2010. - 252 с.
28. Mazurkevich A.Y. Pathophysiology of animals / Mazurkevich AY, Tarasevich VL, Klyugi J. - K .: Higher school, 2000. -352 p.

6.3.Software

- Computers with software for practical work
- Microsoft Power Point - data visualization Microsoft Power BI - analytics and data visualization
- Multimedia projector, whiteboard and screen;

- Moodle distance learning and control system

Додаток

Рецензія на Робочу програму (силабус)

Параметр, за яким оцінюється робоча програма (силабус) освітнього компонента гарантом або членом проєктної групи	**Так**	**Ні**	**Коментар**
Результати навчання за освітнім компонентом (ДРН) відповідають НРК	+		
Результати навчання за освітнім компонентом (ДРН) відповідають передбаченим ПРН (для обов'язкових ОК)	+		
Результати навчання за освітнім компонентом дають можливість виміряти та оцінити рівень їх досягнення	+		

Член проектної групи ОП _____ _____

Параметр, за яким оцінюється робоча програма (силабус) освітнього компонента викладачем відповідної кафедри	**Так**	**Ні**	**Коментар**
Загальна інформація про освітній компонент є достатньою	+		
Результати навчання за освітнім компонентом (ДРН) відповідають НРК	+		
Результати навчання за освітнім компонентом (ДРН) дають можливість виміряти та оцінити рівень їх досягнення	+		
Результати навчання (ДРН) стосуються компетентностей студентів, а не змісту дисципліни (містять знання, уміння, навички, а не теми навчальної програми дисципліни)	+		
Зміст ОК сформовано відповідно до структурно-логічної схеми	+		
Навчальна активність (методи викладання та навчання) дає змогу студентам досягти очікуваних результатів навчання (ДРН)	+		
Освітній компонент передбачає навчання через дослідження, що є доцільним та достатнім для відповідного рівня вищої освіти	+		
Стратегія оцінювання в межах освітнього компонента відповідає політиці Університету/факультету	+		
Передбачені методи оцінювання дозволяють оцінити ступінь досягнення результатів навчання за освітнім компонентом	+		
Навантаження студентів є адекватним обсягу освітнього компонента	+		
Рекомендовані навчальні ресурси є достатніми для досягнення результатів навчання (ДРН)	+		
Література є актуальною	+		

Рецензент (викладач кафедри) _____ _____ _____

(назва) (посада, ПІБ) (підпис)