SYLLABUS OF AN ACADEMIC DISCIPLINE

«Clinical diagnosis of animal diseases»

Academic degree - Master's
Specialty 211 - "Veterinary medicine"
Academic programme "Veterinary medicine"

Year of study 3, semester 5, 6
Form of study Full-time form of study (full-time, part-time)
Number of ECTS credits 7
Language(s) of instruction English (Ukrainian, English, German)

Lecturer of the discipline	A. O. Zemlianskyi, PhD Associate Professor
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URL of the e-learning course on the NULES e-learning portal	**https://elearn.nubip.edu.ua/course/view.php?id=5307**

ACADEMIC DISCIPLINE DESCRIPTION

(up to 1000 symbols)

Clinical examination is a fundamental part of the process of veterinary diagnosis. The purpose of this course is to assist clinicians in performing a detailed clinical examination of the individual animal and to increase the awareness of more advanced techniques used in further investigations. The structure and content of the course should assist veterinary students in their understanding of animal clinical examination and circulatory system investigation. The course focuses on preparing students for education as research methods of the respiratory, digestive, urinary and nervous systems of the animal body and the blood system.

Competences of the discipline:

Integral competence (IC): basic clinical, modern laboratory and instrumental methods of animal research; animal research protocols; clinical terminology; regulatory clinical indicators and their changes due to pathologies; be able: independently conduct a clinical study of animals; analyze the obtained results of clinical observations, instrumental and laboratory studies; reflect, logically argue the definition of differential and final diagnosis for infectious and non-infectious diseases of a sick animal; communicate with clients, colleagues and support staff on professional issues, both in writing and orally; correctly draw up clinical documentation in accordance with the sequence according to the animal research protocol.

General competences (GC):

- ZK 1. Ability to abstract thinking, analysis and synthesis.
- ZK 2. Ability to apply knowledge in practical situations.
- ZK 3. Knowledge and understanding of the subject field and profession.
- ZK 7. Ability to conduct research at the appropriate level.
- ZK 8. Ability to learn and master modern knowledge.
- ZK 9. Ability to make informed decisions.
- ZK 11. Ability to evaluate and ensure the quality of performed works.

Special (professional) competences (SC): – FC 2. The ability to use tools, special devices, devices, laboratory equipment and other technical means to carry out the necessary manipulations during the performance of professional activities.

– FC 3. Ability to follow the rules of labor protection, asepsis and antiseptics during professional activity.

- FC 4. The ability to conduct clinical research with the aim of formulating conclusions about the condition of animals or establishing a diagnosis.

- FC 6. Ability to select, pack, fix and send samples of biological material for laboratory research.

– FC 7. Ability to organize, conduct and analyze laboratory and special diagnostic studies.

– FC 8. Ability to plan, organize and implement measures for the treatment of animals suffering from non-contagious, infectious and invasive diseases.

- FC 13. Ability to develop strategies for the prevention of diseases of various etiologies.

Expected Learning Outcomes (ELO): In the process of studying the discipline "Clinical diagnosis of animal diseases", applicants of higher education must:

- master the techniques of handling animals, methods of their fixation and taming;

- master the methods of clinical research of animals, including physical, instrumental and laboratory methods;

- master the protocols and sequence of clinical examination of animal organs and systems;

- acquire certain skills and clinical competences during the establishment, study and determination of the main symptoms of internal diseases of animals of infectious and non-infectious etiology;

- learn the patient's clinical history;

- to acquire thinking skills, logical clinical argumentation when determining the differential and establishing the final diagnosis;

- master the method of dispensation of animals;

- acquire communication skills, both in written and oral form, with clients, colleagues, support staff;

- master the rules of professional ethics and deontology

ACADEMIC DISCIPLINE STRUCTURE

Topic	**Hours** (lectures/laboratory, s.st)	**Learning outcomes**	**Tasks**	**Assessment**
1 semester				
Module 1 General diagnosis				
Topic No. 1. Methods of clinical examination of an animal	*2/6/4*	To know the methods of clinical examination of an animal	Submitting a laboratory work	6
Topic No. 2 Symptoms and syndromes of diseases. Diagnosis. Prognosis	*3/6/4*	To be able to recognize symptoms and syndromes of diseases. Diagnosis. Prognosis	Submitting a laboratory work	7
Topic No. 3. Study of the general condition of the animal	*2/4/4*	To know the general condition of the animal	Submitting a laboratory work. Completing tests.	6
Total according to module No. 1	*7/16/12*			19
Module 2. Clinical examination of the cardiovascular system				

Topic 4. Basic methods of heart research	*2/4/4*	To know the basic methods of heart research	Submitting a laboratory work	6
Topic 5. Study of heart tones by auscultation. Changes in heart tones due to pathologies	*2/4/4*	To understand the heart tones by auscultation. To analyse changes in heart tones due to pathologies	Submitting a laboratory work	7
Topic 6. Heart murmurs	*2/4/2*	To analyse heart murmurs	Submitting a laboratory work	6
Topic 7. Additional studies of the heart	*2/4/2*	To know the additional studies of the heart	Submitting a laboratory work	6
Topic 8. Investigation arteries and veins Arrhythmias. Analysis of clinical cases with pathology of the cardiovascular system	*2/2/2*	To be able to do investigate arteries and veins Analysis of clinical cases with pathology of the cardiovascular system	Submitting a laboratory work. Completing tests.	7
Total according to module No. 2	*10/18/14*			32
Module 3. Clinical examination of the respiratory tract				
Topic 9. Significance, scheme and methods of research of the respiratory system	*2/4/4*	To know the scheme and the methods of research of the respiratory system	Submitting a laboratory work	6
Topic 10. Detailed examination of upper respiratory tract and chest	*2/2/4*	To know the detailed examination of upper respiratory tract and chest	Submitting a laboratory work	7
Topic 11. Auscultation of the lungs	*2/4/4*	To understand the auscultation of the lungs	Submitting a laboratory work. Completing tests.	6
Total according to module No. 3	*6/10/12*			19

Credit			Completing tests.	30
Total for 1st semester	*23/67/38*			100
2nd semester				
Module 4. Clinical examination of the alimentary system				
Topic 12. Examination of feed and water intake. Appetite, chewing and belching and their changes	*2/6/6*	To be able to do the examination of feed and water intake. Exam the appetite, chewing and belching and their changes	Submitting a laboratory work	8
Topic 13. Examination of the forestomach and abomasum. Examination of liver	*2/8/4*	To be able to do the examination of the forestomach and abomasum. Examination of liver	Submitting a laboratory work	8
Topic 14. Examination of stomach, pharynx, gastric juice and stomach contents.	*2/8/4*	To be able to do the examination of stomach, pharynx, gastric juice and stomach contents.	Submitting a laboratory work. Completing tests.	7
Total according to module No. 4	*6/22/14*			23
Module 5. Clinical examination of the urinary system and the nervous system				
Topic 15. Examination of kidneys and bladder	*2/4/4*	To be able to do the examination of kidneys and bladder	Submitting a laboratory work	8
Topic 16. Appearance and analysis of urine	*4/4/4*	To analyse the appearance of urine. To understand the analysis of urine	Submitting a laboratory work	8
Topic 17. Examination of the nervous system	*2/8/2*	To be able to do the examination of the nervous system	Submitting a laboratory work	8
Topic 18. Study of sensitivity, reflexes, coordination of movements, convulsions, paresis and	*2/2/1*	To analyse the sensitivity, reflexes, coordination of movements, convulsions, paresis and paralysis and	Submitting a laboratory work. Completing tests.	8

paralysis and their diagnostic value.		their diagnostic value.		
Total according to module No. 5	*10/18/11*			32
Module 6. Examination of blood				
Topic 19. Examination of blood system	*4/6/6*	To know the examination of blood system	Submitting a laboratory work	8
Topic 20. Examination of blood morphology and the immune system	*2/4/6*	To know the examination of blood morphology and the immune system	Submitting a laboratory work. Completing tests.	7
Total according to module No. 6	*6/10/12*			15
Topic 21. Conclusion of the educational discipline "Clinical diagnosis of animal diseases"	*2/2/0*	To be able to do clinical diagnosis of animal diseases	Submitting a laboratory work	
Total for 2ed semester	*22/23/37*			70
Total for the course	*45/90/75*			**70**
Examination				**30**
Total for the course				**100**
Course project (work)	30			**100**

ASSESSMENT POLICY

Deadlines and exam retaking policy:	Works that are submitted late without valid reasons will be assessed with a lower grade. Module tests may be retaken with the permission of the lecturer if there are valid reasons (e.g. a sick leave).
Academic integrity policy:	Cheating during tests and exams is prohibited (including using mobile devices). Term papers and essays must have correct references to the literature used
Attendance policy:	Attendance is compulsory. For good reasons (e.g. illness, international internship), training can take place individually (online by the faculty dean's consent)

SCALE FOR ASSESSING STUDENTS 'KNOWLEDGE AND SKILLS

Student's rating, points	National grading of exams and credits	
	exams	credits
90-100	excellent	pass
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	fail

Educational and methodological support

- електронний навчальний курс навчальної дисципліни (на навчальному порталі НУБіП України eLearn:

https://elearn.nubip.edu.ua/course/view.php?id=5307

- Лабораторне дослідження сечі. Методичні вказівки до проведення практичних занять / М.І. Цвіліховський, Т.І. Левищенко, О.М. Якимчук, В.О. Бондар та ін.. К., НУБіП України. 2014. 45 с.
- Здорове і хворе серце тварин. Методичні вказівки для підготовки лікаря ветеринарної медицини ОКР «Магістр» / Цвіліховський М.І., Береза В.І., Палюх Т.А., Немова Т.В. та інші. К. «Компринт». 2014. 37 с.
- Як уникнути помилок при дослідженні та побудові діагнозу хвороб системи дихання в тварин? Методичні вказівки для підготовки лікаря ветеринарної медицини ОКР «Магістр» / Береза В.І., Палюх Т.А., Немова Т.В. та інші. К., «Компринт». 2014. 33 с.
- Ультразвукова діагностика хвороб нирок у дрібних домашніх тварин. Методичні вказівки для підготовки фахівців ОКР «Магістр» / Боднар В.О., Якимчук О.М., Немова Т.В., Павелиця О.О. та ін. К., «Компринт». 2014. 49с.
- Бондар В.О., Якимчук О.М., Маринюк М.О., Обруч М.М. Сучасні методи діагностики у ветеринарній медицині дрібних домашніх тварин: (МАГНІТНО-РЕЗОНАНСНА ТОМОГРАФІЯ). Частина 2: Методичні вказівки для підготовки фахівців ОС «Магістр» за спеціальністю 211 – Ветеринарна медицина. К., «ЦП»КОМПРИНТ», 2017. 35 с.
- Цвіліховський М.І., Якимчук О.М., Маринюк М.О., Костюк О.С., Якимчук І.М Сучасні методи дослідження серця. К., «ЦП «КОМПРИНТ», 2020. 24 с.
- Цвіліховський М.І., Якимчук О.М., Маринюк М.О., Якимчук І.М. Діагностика хвороб серцево-судинної системи. К., «ЦП «КОМПРИНТ», 2020. 26 с.
- Цвіліховський М.І., Якимчук О.М., Маринюк М.О., Костюк О.С., Якимчук І.М. Сучасна електрокардіографія тварин. К., «ЦП «КОМПРИНТ», 2020. 22 с.
- Цвіліховський М.І., Якимчук О.М., Маринюк М.О., Якимчук І.М. Діагностика хвороб дихальної системи тварин. К., «ЦП «КОМПРИНТ», 2020. 24 с.

Recommended sources of information

1. Clinical examination of organs and systems of animals. Training Manual / For the training of specialists in the field of knowledge "Veterinary Medicine" of higher education institutions / [M. Tsvilikhovskiy, O. Yakymchuk, M. Maryniuk, I. Yakymchuk, O.Berezovska]; for ed. M.I. Tsvilikhovskiy. K.: CP "KOMPRINT", 2018. 370 p.
2. Клінічна діагностика внутрішніх хвороб тварин / За ред. В.І. Левченко. Біла Церква. 2017. 544 с
3. Цвіліховський М.І., Бондар В.О., Якимчук О.М., Маринюк М.О. Практикум з клінічної діагностики хвороб тварин. К., «ЦП»КОМПРИНТ», 2017. 307 с.
4. Цвіліховський М.І., Якимчук О.М., Бондар В.О., Маринюк М.О., Обруч М.М., Якимчук І.М. Клінічне дослідження органів і систем тварин: навчальний посібник. К., "ЦП"КОМПРИНТ". 2017. 382 с.
5. Цвіліховський М.І., Якимчук О.М., Маринюк М.О., Бондар В.О., Якимчук І.М.,

Іванченко Н.Ю. Клінічна діагностика хвороб тварин. Частина 1. Інструментальні методи дослідження серця тварин: навчальний посібник. К., "ЦП" КОМПРИНТ". 2017. 126 с.

6. Цвіліховський М.І., Береза В.І., Костенко В.М., Бойко Н.І., Голопура С.І., Грушанська Н.Г., Якимчук О.М. Спеціальна пропедевтика, терапія і профілактика внутрішніх хвороб тварин: навчальний посібник. К., "ЦП"КОМПРИНТ", 2017. 607 с.

7. www.nbuv.gov.ua/ – Національна бібліотека України імені В. І. Вернадського

8. www.dnsgb.com.ua – Національна Наукова Сільськогосподарська Бібліотека Національної Академії Аграрних Наук

9. http://dspace.nubip.edu.ua/ – Наукова бібліотека Національного університету біоресурсів і природокористування України