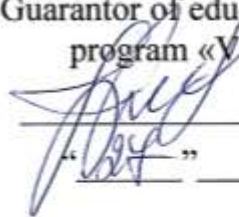


MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
Snepan Gzhitsky National University of Veterinary Medicine and
Biotechnologies Lviv

Faculty of Veterinary Medicine
Department of Internal Animal Diseases and Clinical Diagnostics

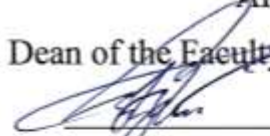
AGREE

Guarantor of educational and professional
program «Veterinary medicine»


Iryna KOVALCHUK
"27" 06 2024

APPROVE

Dean of the Faculty of Veterinary Medicine


Yuriy STRONSKY
"27" 06 2024

WORK PROGRAM ON EDUCATIONAL PRACTICE

OC 28. Internal animal diseases

level of higher education second (master's)
field of knowledge 21 «Veterinary»
specialty 211 «Veterinary medicine»
educational program «Veterinary Medicine»
type of discipline obligatory
study program full-time

Work program for the educational discipline of VD 8. "Professional ethics, deontology and history of veterinary medicine" for applicants of the second (master's) level of education in specialty 211 "Veterinary Medicine" under the educational program "Veterinary Medicine".

Compilers:


head of department, DVSc, professor
SLIVINSKA

Liubov

associate professor of department, PhD, associate professor
ZINKO

Halyna

The work program was reviewed and approved at the meeting of the Department of Animal Internal Diseases and Clinical Diagnostics, protocol No. 12 of "06" 06 2024

Head of the Department of Internal Animal Diseases and clinical diagnostics, Dr. Vet. Sciences, professor  Liubov SLIVINSKA

Approved by the Commission on the Use of Animals and Ethical Expertise

protocol № 22 from "25" 06 2024

Head of commission  Andrii MYSAK

Approved by the educational and methodical commission of specialty 211 "Veterinary Medicine"

protocol № 9 from "21" 06 2024

Head of cummission  Andrii TYBINKA

Approved by the decision of the educational and methodical Council of Faculty of Veterinary Medicine

protocol № 9 from "21" 06 2024

Head of council  Andrii TYBINKA

Approved by the Academic Council of Faculty of Veterinary Medicine

protocol № 8 from "27" 06 2024

1. DESCRIPTION OF EDUCATIONAL DISCIPLINE

Name of indicators	Hours in general
	Full-time educational form
Semester	9
Number of credits / hours	1/30
Total hours of classroom work	30
including:	
• lectures, hours	-
• practical classes, hours	30
• laboratory classes, hours	-
• seminar classes, hours	-
Total hours of individual work	-
Type of control	9th semester – test

Note.

The share of classroom study time of student in percentage:

for full-time form of education – 50 %

2. SUBJECT, PURPOSE AND OBJECTIVES OF EDUCATIONAL DISCIPLINE

2.1. Subject, purpose of educational discipline

The subject of study of educational discipline "Internal animal diseases" are the causes, mechanisms of development, clinical and morphological manifestations, course, methods of diagnostic, treatment and prevention of internal organs diseases of non-infectious nature.

The purpose of the practice is to master modern methods and forms of work organization, student formation; on the basis of the knowledge, professional skills, and skills acquired by them at the educational institution, necessary for making independent decisions in real market conditions, educating future specialists of the need to systematically update their knowledge and creatively apply it in practical activities.

The content of practical training is determined by the educational program (OP), the curriculum and programs of academic disciplines in accordance with the "Regulations on practical training for students of higher educational institutions of Ukraine" developed by the Ministry of Education and Science (MES) of Ukraine. The issue of organizing internships is outlined in methodological recommendations for internships of students in agricultural higher educational institutions. Kyiv, Agrarian Education, 2004. – 18 p.

Completion of the educational practice of the discipline "Internal Diseases of Animals" is based on the following learned disciplines: "Animal Anatomy", "Animal Physiology", "Veterinary Pathophysiology", "Animal Feeding", "Animal Nutrition and Fodder Production", "Pathomorphological Morphology and Dissection", "Biochemistry", "Veterinary pharmacology", "Clinical diagnostics", "Veterinary clinical biochemistry", "Veterinary toxicology".

The acquired knowledge from the educational practice of the discipline "Internal diseases of animals" is the basis for studying the following educational disciplines: "Hygiene of food products and feed", "Obstetrics, gynecology and biotechnology of animal reproduction", "Epizootology and infectious diseases", "General and special surgery", "Parasitology and invasive diseases", "Clinical pharmacology", "Clinical veterinary laboratory diagnostics", "Non-invasive diagnostic methods".

2.2. Tasks of the educational discipline (GC, SC (PC))

The study of the educational discipline involves the formation of students with the necessary competencies:

– general competencies:

- ability to abstract thinking, analysis and synthesis (GC₁);
- ability to apply knowledge in practical situations (GC₃);
- skills in the use of information and communication technologies (GC₇);
- ability to conduct research at the appropriate level, make informed decisions, evaluate and ensure the quality of work performed (GC₈);
- ability to communicate with non-specialists in their field (with experts from other fields) (GC₉);

– special (professional) competencies:

- ability to use tools, special devices, instruments, laboratory equipment and other technical means to perform the necessary manipulations during professional activities (SC₂);
- ability to follow the rules of labor protection, asepsis and antiseptics during professional activities (SC₃);
- ability to conduct clinical researches in order to formulate conclusions about the condition of the animals or to establish a diagnosis (SC₄);
- ability to organize, conduct and analyze laboratory and special diagnostic tests (SC₇);
- ability to plan, organize and implement measures for the treatment of animals with non-contagious, infectious and invasive diseases (SC₈);

2.3. Programme learning outcomes (PLO)

As a result of studying the educational discipline, the student must be able to demonstrate the following learning outcomes:

- know the basic parameters of the structure of organs function and the characteristics and purpose of technical devices used to determine these parameters (PLO₂);
- know the rules of safety, personal hygiene, asepsis and antiseptics (PLO₃);
- know the etiology and pathogenesis of diseases, analyze the epizootic and ecological situation,

conditions of keeping, feeding and exploitation of animals, take into account their physiological condition, species, breed and individual characteristics, know the methods and techniques of clinical research (PLO₄);

have knowledge of the etiology and pathogenesis of animal diseases, current regulations relating to this type of professional activity, to know the latest methods and techniques of laboratory research (PLO₆);

know the etiology and patterns of development of the pathological process of non-contagious diseases of animals, ways to prevent and avoid them (PLO₁₃).

3. THE STRUCTURE OF EDUCATIONAL DISCIPLINE

3.1. Distribution of classes by discipline sections

Names of sections and topics	Number of hours			
	full-time form of education (FTEF)			
	total	including		
lectures		laboratory classes	individual work	
1	2	3	4	5
9th semester				
Section 1. General therapy of internal animal diseases.				
Topic 1.1. Methods of using medicines.	6	-	6	-
Topic 1.2. Therapeutic technique.	6	-	6	-
Topic 1.3. Types of therapy.	6	-	6	-
Topic 1.4. Methods of therapy.	4	-	4	-
Together under section 1	22	-	22	-
Section 2. General prevention of internal animal diseases.				
Topic 2.1. Dispensary of farm animals.	8	-	8	-
Together under section 14	8	-	8	-
TOTAL hours	30	-	30	-

3.3. Laboratory classes

Number in order	Topic names and their summary	Number of hours
		FTEF
9th semester		
Section 1. General therapy of internal animal diseases.		
1	Topic 1.1. Methods of using medicines. Learning the provisions of labor protection and safety when working with animals in the conditions of the farm, veterinary medicine clinic and personal hygiene when working with sick animals. To acquire skills and abilities in the technique of administration of medicinal substances of various species to animals by the enteral route.	2
2-3	Parenteral administration and its types. Injections of medicines. Intraperitoneal administration of drugs. Administration of drugs into respiratory organs. Aerosol therapy and aerosol prophylaxis. Catheterization. Administration of drugs into the organs of the genitourinary system.	4
4	Topic: Therapeutic technique. Providing medical care for esophageal obstruction in animals.	2
5	The technique of washing of the rumen, reticulum, omasum and stomach with medicinal substances and water. The technique of finding and removing foreign bodies from the rumen.	4
7	Topic: Types of therapy. Etiotropic therapy. Preparation for the use of antibiotics, probiotics, antidotes, specific biological preparations.	2
8-9	Pathogenetic therapy. The use of means that regulate neurotrophic functions for reflexology, immunostimulating therapy, nonspecific stimulating therapy, replacement therapy, vitamin therapy, mineral therapy, enzyme therapy and enzyme prophylaxis.	4
10-11	Topic: Therapy methods. Compilation of rations with diet food (diet therapy). Pharmacotherapy (phyto-, apitherapy). Work with equipment for light therapy, electrotherapy, hydro- and thermotherapy, mechanotherapy.	4
Section 2. General prevention of internal animal diseases.		
12	Topic: Dispensary of farm animals. Examination of cows. Compilation of a dispensation plan, study of herd syndromes, analysis of feeding and keeping of animals. Study of ten animals per student with an anamnesis of the obtained data. Based on the analysis of the results of the clinical examination and herd syndromes, draw up a treatment plan for animals with detected diseases. Compilation of a plan of preventive measures in the economy, an act of the conducted dispensation.	4
13	Dispensation of young animals in beef farms, during the growing and fattening period, as well as heifers. Methods of dispensation of sheep, horses, pigs, poultry.	4
Total hours		30

3.4. Individual work

Title page of the educational practice diary

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Faculty of Veterinary Medicine
Department of Internal Animal Diseases and Clinical Diagnostics
Specialty 211 «Veterinary medicine»

DIARY

educational practice from the discipline _____

student of _____ *group of* _____ *course*

(Surname, name)

Place of practice _____

(institution name)

Lviv-2024

The form of entries in the educational practice diary

№ п/п	Date	The name of the topic and its execution	Number of hours	Score
1	2	3	4	5

5. Teaching methods

The study of the subject "Internal animal diseases" is carried out using the following methods:

- use of educational visual material (tables, diagrams, stands, models, slides, etc.);
- use of computer programs, videos;
- solving situational tasks;
- conducting clinical researches and evaluation of the obtained results;
- conducting laboratory tests and evaluation of the obtained results;
- scientific research work;
- individual work of students.

The main types of training according to the curriculum are:

- practical classes;

Laboratory classes according to the method of their organization are practice-oriented and include:

- study of methods of research of animals, equipment and sequence of their application at research of separate organs and systems, that is, therapeutic technique, in order to recognize diseases of internal organs;

- learn to analyze the indicators identified in the study of individual organs and systems (body temperature, heart rate and respiration, rumen reduction, heart rate, respiratory noises, etc.) and their deviation from the parameters of healthy animals;

- learn to summarize the symptoms obtained during the study of a sick animal, group them into pathogenetically related groups (symptom complexes or syndromes) and on this basis to diagnose and prescribe treatment.

6. Control methods

The assessment system is carried out in accordance with the requirements of the discipline programme and "Instructions on the system of assessment of students' learning activities in the credit-module system of educational process", approved by the Ministry of Health of Ukraine (2005).

Current control is carried out in each laboratory classes in accordance with the specific objectives of the current topic. All laboratory classes provide objective control of theoretical training and control of the acquisition of practical skills in the form of testing, written and (or) oral examination, solving situational problems. Topics are controlled in the classroom (initial control – as the level of readiness for laboratory classes and final – the level of knowledge and skills acquired).

The current control and evaluation of students' individual work, which is provided along with the classroom work, is carried out during the current control of the topic in the relevant classroom lesson in accordance with the specific objectives of each topic.

Test is a form of final control, which consists in assessing the student's mastery of educational material in a particular discipline and on the basis of the results of his performance of certain types of work in the laboratory classes. The semester test is held during the test week.

7. Criteria for evaluating the learning outcomes of higher education students

Criteria for evaluation the current control and exam

A grade of "**excellent**" is given to a student who has deeply mastered the programme material, given a comprehensive, consistent, competent and logical answer to the questions, closely linked theoretical issues with practical activities. The student must demonstrate knowledge of monographic literature (textbooks, manuals) and periodicals (scientific, practical and abstract journals, reviews of new literature, etc.), on the etiology, pathogenesis, diagnostics, treatment and prevention of internal animal diseases.

The grade "**good**" is given to a student who knows for sure the programme material, competently and essentially answers it, does not make significant mistakes in answering questions, correctly knows how to apply theoretical principles in solving practical problems and tasks.

A grade of "**satisfactory**" is given to a student who has knowledge only of textbook material, but has not mastered certain details, admits inaccuracies, insufficiently correct wording, violates the consistency in the presentation of the programme material and has difficulty performing laboratory classes.

The grade "**fail**" is given to a student who does not know a significant part of the programme material, makes significant mistakes, is unsure, with great difficulty performs laboratory work and practical skills.

The student's success is evaluated by checking the implementation of the practice program, practical skills and the preparation of reporting documentation.

Educational practice in the discipline "Internal Diseases of Animals" for students of the 5th year of the Faculty of Veterinary Medicine is held in the 9th semester and ends with a credit.

The maximum number of points for educational practice is 100, they are distributed as follows:

70 (CC) + 30 (diary) = 100, where:

70 (CC) - 70 maximum points from the current control that a student can score for educational practice

where:

70 (CC) – 70 maximum marks on the current control that a student can earn per semester

$$CC = \frac{70 \times AM}{5} = 14 \times AM$$

AM – arithmetic mean of current control

where:

30 (diary) – 30 maximum marks that a student can score for diary.

Criteria for evaluation of the study practice diary

Types of work	Maximum number of points
Implementation of the practice program	10
Acquisition of practical skills	10
Completion of practice reporting documentation	10

Based on the results of the semester control in the academic record of student in the column "on a national scale" is graded "excellent/good/satisfactory/fail".

Assessment of learning outcomes is carried out in marks, the maximum number of which for

each final control is 100. Each sum of marks corresponds to grade on the national scale and the ECTS scale (Table 1).

Table 1.

Grading scale of students

On a 100-mark scale	National grade		ECTS grade
	Exam, differentiated test	Test	
90 - 100	Excellent	Passed	A
82 - 89	Good		B
74 - 81			C
64 - 73			Satisfactory
60 - 63	E		
35 - 59	Fail with the possibility of re-passing		FX
0 - 34	Fail with obligatory re-study of the discipline		F

8. Educational and methodical support

1. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. General therapy and prevention of internal animal diseases. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 66 p.
2. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Physiotherapy and physioprophyllaxis. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 27 p.
3. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the oral cavity, pharynx and esophagus. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 15 p.
4. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the rumen, reticulum, omasum and abomasum. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 46 p.
5. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the stomach and intestines. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 23 p.
6. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the liver, bile ducts and peritoneum. Diseases of the pancreas.. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 55 p.
7. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the cardiovascular system. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 35 p.
8. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the respiratory system. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 39 p.
9. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the kidneys and urinary tract. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 67 p.
10. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the blood system. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 27 p.
11. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Diseases of the immune system. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for foreign students of the speciality 221 «Veterinary medicine». Lviv: Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, 2024: 19 p.
12. Slivinska L.G, Lychuk M.G., Zinko H.O., Stefanyk O.V. Skin diseases. Educational and methodological guidelines for laboratory classes on subject “Internal animal diseases” for

9. Recommended literature

Basic literature

1. Textbook of veterinary internal medicine. Edited by Stephen J. Ettinger, Edward C. Feldman. 8th ed. (two-volume set): Elsevier, 2017.
2. Equine internal medicine. Edited by Stephen M. Reed, Warwick M. 4th ed. Elsevier, 2018. 1576 p.
3. Clinical Small Animal Internal Medicine. Edited by Daviv Bruyette, 2 Volume Set, 2020, 1708 p.

Supporting literature

1. Large Animal Internal Medicine. Edited by Bradford P. Smith, David C. Van Metre, Nicola Pusterla. 6th edition. Elsevier, 2020.
2. Vlizlo, V. V., Prystupa, O. I., Slivinska, L. G., Hu Shan, Voloshyn, R. V., Gutyj, B. V., Maksymovych, I. A., Shcherbatyy, A. R., Lychuk, M. G., Chernushkin, B. O., Leno, M. I., Rusyn, V. I., Drach, M. P., Fedorovych, V. L., Zinko, H. O., & Yaremchuk, V. Y. (2021). Proteinsynthesizing, bile-forming, urea-forming and carbohydrate functions in cows with fatty degeneration of the liver. *Scientific Messenger of Lviv National University of Veterinary Medicine and Biotechnologies. Series: Veterinary sciences*, 23(104), 60–64. DOI: 10.32718/nvlvet10410.
3. Vlizlo, V. V., Prystupa, O. I., Slivinska, L. G., Lukashchuk, B. O., Hu, Shan, Gutyj, B. V., Maksymovych, I. A., Shcherbatyy, A. R., Lychuk, M. G., Chernushkin, B. O., Leno, M. I., Rusyn, V. I., Drach, M. P., Fedorovych, V. L., Zinko, H. O., & Yaremchuk, V. Y. (2021). Functional state of the liver in cows with fatty liver disease. *Ukrainian Journal of Ecology*, 11(3), 168–173. DOI: 10.15421/2021_159.
4. Slivinska, L. G., Fedorovych, V. L., Shcherbatyy, A. R., Fedorovych, N. M., Gutyj, B. V., Vlizlo, V. V., Lychuk, M. G., Maksymovych, I. A., & Zinko, H. O. (2023). Diagnostic informativeness of markers of bone-tissue metabolism and bone resorption in cows with osteodystrophy. *Regulatory Mechanisms in Biosystems*, 14(3), 349–353. doi:10.15421/022351.
5. Vlizlo, V. V., Prystupa, O. I., Slivinska, L. G., Lukashchuk, B. O., Hu, S., Gutyj, B. V., Maksymovych, I. A., Shcherbatyy, A. R., Lychuk, M. G., Chernushkin, B. O., Leno, M. I., Rusyn, V. I., Drach, M. P., Fedorovych, V. L., Zinko, H. O., & Yaremchuk, V. Y. (2021). Functional state of the liver in cows with fatty liver disease. *Ukrainian Journal of Ecology*, 11(3), 167–173.

10. Information resources

1. <https://eclinpath.com/> – Online Textbook on Veterinary Clinical Pathology (last accessed: 24.06.2024).
2. <https://eclinpath.com/hematology/> – Online Textbook on Veterinary Clinical Pathology–*Hematology* (last accessed: 24.06.2024).
3. <https://eclinpath.com/urinalysis/> – Online Textbook on Veterinary Clinical Pathology –*Urinalysis* (last accessed: 24.06.2024).
4. <https://eclinpath.com/chemistry/> – Online Textbook on Veterinary Clinical Pathology –*Biochemical research* (last accessed: 24.06.2024).
5. <http://ps.oxfordjournals.org/> – “Poultry Science” journal (last accessed: 24.06.2024).