Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Veterinary Medicine
Department of Epidemiology and Parasitology

Syllabus of the educational component

Invasive diseases of small animals

(selective)

Implemented within the educational program

"Veterinary Medicine"

(name)

in specialty 211 " Veterinary Medicine "

(code, name)

at the second (master's) level of higher education

Sumy – 2025

Developer: Rysovany V. I. **docent**

(signature) (surname, initials) (academic degree and title, position)

Reviewed, approved and ratified at the meeting of the Department of Epidemiology and Parasitology	Protocol No. 17 of June 12, 2025
	Manager Departments (signature) Kasianenko O.I. (last name, initials)

Agreed:

Educational program guarantor _____ (signature) (full name)

Dean of the faculty where the educational program is implemented _____ Lyudmila NAGORNA

Review of the work program (attached) provided by: _____ (Full name)

_____ (Full name)

Methodologist of the Education Quality Department, licensing and accreditation _____ (signature) (full name)

Registered in the electronic database: date: 02.06. 2025.

Information about reviewing the work program (syllabus):

Academic year in which changes are made	Number of the appendix to the work program with a description of the changes	Changes reviewed and approved		
		Date and number of the minutes of the department meeting	Head of the Department	Educational program guarantor

1. GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

<table>
<tr><td>1.</td><td>Name OK</td><td colspan="4">Invasive diseases of small animals</td></tr>
<tr><td>2.</td><td>Faculty/department</td><td colspan="4">Faculty of Veterinary Medicine / Department of Epizootology and Parasitology</td></tr>
<tr><td>3.</td><td>Status OK</td><td colspan="4">Selective</td></tr>
<tr><td>4.</td><td>Program/Specialty (programs) that include OK for (filled in for mandatory OK)</td><td colspan="4"></td></tr>
<tr><td>5.</td><td>The OK can be offered for (filled in for selective OKs)</td><td colspan="4">211 Veterinary medicine</td></tr>
<tr><td>6.</td><td>NRC level</td><td colspan="4">Level 7</td></tr>
<tr><td>7.</td><td>Semester and duration of study</td><td colspan="4">10th semester, 15 weeks</td></tr>
<tr><td>8.</td><td>Number of ECTS credits</td><td colspan="4">5.0</td></tr>
<tr><td rowspan="2">9.</td><td rowspan="2">Total volume -150 hours and their distribution</td><td colspan="3">Contact work (classes)</td><td rowspan="2">Independent work</td></tr>
<tr><td>Lectures</td><td>Practical/seminar</td><td>Laboratory</td></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>38</td><td>112</td></tr>
<tr><td>10.</td><td>Language of instruction</td><td colspan="4"></td></tr>
<tr><td>11.</td><td>Teacher/Educational Component Coordinator</td><td colspan="4">Candidate of Veterinary Sciences , senior lecturer Rysovany V.I.
Senior lecturer Negreba Yu.V.</td></tr>
<tr><td>11.</td><td>Contact information</td><td colspan="4">Risovany V.I. - building . 3, room . 62, tel.: 0963007430; viber 0974706536 rvisu@ukr.net ;
Negreba Yu.V. - corp . 3 , room 62, phone: 09 89498577 ; viber 0662967712
Yla7578 @ukr.net ;</td></tr>
<tr><td>12.</td><td>General description of the educational component</td><td colspan="4">The educational component studies the main parasitic diseases of horses, methods of intravital and postmortem diagnosis of equine parasitosis , treatment of horses for diseases, as well as prevention and control measures for diseases of parasitic etiology.</td></tr>
<tr><td>13.</td><td>Purpose of the educational component</td><td colspan="4">The goal of teaching the academic discipline is to teach students to investigate environmental objects, study the parasitological situation, and implement bioecological methods for the prevention of parasitosis in horse farms of various forms of ownership.</td></tr>
<tr><td>14.</td><td>Prerequisites for studying OK, connection with other educational components of OP</td><td colspan="4">The OC is important in the training of a veterinary medicine specialist. The educational component is based on the study of the OC:
ecology, physiology, zoology and anatomy of animals, parasitology and invasive diseases, animal parasitosis , etc.</td></tr>
<tr><td>15.</td><td>Academic Integrity Policy</td><td colspan="4">During the study of the OK, any manifestations of academic dishonesty are not allowed. And the tools for combating violations of academic integrity are the Plagiarism check algorithm systems . In the event of violations, the</td></tr>
</table>

		response is in accordance with the regulatory documentation on the academic integrity of participants in the educational process at Sumy NAU (https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/). If a violation of academic integrity is detected , the completed task is not credited and is sent for re-execution.
16.	Link to the course in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=3005

2. LEARNING OUTCOMES BY EDUCATIONAL COMPONENT AND THEIR RELATIONSHIP WITH PROGRAM LEARNING OUTCOMES

Results training for OK: After study educational component, the student is expected to be able to ..."	How is RND assessed?
DRN 1. Define and implement a system of veterinary and sanitary measures in conditions livestock farms .	Rating control on the 100-point ECTS assessment scale. Multi-criteria assessment of the current work of higher education applicants: survey of theoretical questions, assessment of the level of knowledge demonstrated in laboratory and practical classes; multiple-choice test; independent study of the topic as a whole or individual questions of independent work of higher education applicants (testing results, preparation of presentations, presentation report of independently developed material). Activity is taken into account during the discussion of issues raised in the class; express control during classroom classes. During the current and final control in the process of assessing the DRN, scientific publications prepared by the applicant and published in collections that are included in professional publications and/or conference materials are taken into account .
DRG 2. Identify and apply veterinary accompaniment livestock farming in conditions private peasant farms .	Rating control on the 100-point ECTS assessment scale. Multi-criteria assessment of the current work of higher education applicants: survey of theoretical questions, assessment of the level of knowledge demonstrated in laboratory and practical classes; multiple-choice test; independent study of the topic as a whole or individual questions of independent work of higher education applicants (testing results, preparation of presentations, presentation report of independently developed material). Activity is taken into account during the discussion of issues raised in the class; express control during classroom classes. During the current and final control in the process of assessing the DRN, scientific publications prepared by the applicant and published in collections that are included in professional publications and/or conference materials are taken into account .
DRN 3. Identify risks , develop and implement measures to diagnostics , prevention , and treatment of infectious animal diseases .	Rating control on the 100-point ECTS assessment scale. Multi-criteria assessment of the current work of higher education applicants: survey of theoretical questions, assessment of the level of knowledge demonstrated in laboratory and practical classes; multiple-choice test; independent study of the topic as a whole or individual questions of independent work

	of higher education applicants (testing results, preparation of presentations, presentation report of independently developed material). Activity is taken into account during the discussion of issues raised in the class; express control during classroom classes. During the current and final control in the process of assessing the DRN, scientific publications prepared by the applicant and published in collections that are included in professional publications and/or conference materials are taken into account .

3. CONTENT OF THE EDUCATIONAL COMPONENT (COURSE PROGRAM)

Topic. List of issues to be addressed within the topic	Distribution within the overall time budget				Recommended reading from the list in item 6
	Classroom work			CRC	
	Luke	Software	Lab .		
1 semester					
Topic 1. **Occupational safety when performing parasitological research.** Rules for taking material for parasitological research. Transportation and storage of parasitological material. Rules for caring for animals affected by pathogens of invasive diseases.		2	**Occupational safety when performing parasitological research.** Safety precautions when working with invasive material and animals affected by pathogens of invasive diseases. Basic rules for the selection, storage, and labeling of invasive material.	8	
Topic 2. **Biological and ecological foundations of parasitism.** Ecological and biological features of protozoa, helminths, ticks and insects. Animals as a source of pathogens of invasive diseases for other animals and humans, as well as carriers of pathogens of parasitic diseases . The environment and ways of its pollution. Biological pollution of the environment by oocysts , eggs and larvae of parasites.		4	**Biological and ecological foundations of parasitism.** Features of the biological development of protozoa, nematodes, cestodes , trematodes, acanthocephalans, pathogens of arachnoentomosis . Ways of biological contamination of the environment by oocysts , eggs and larvae of parasites.	14	1,3,4,5,6,7,10,11,12,13
Topic 3. **Ways of excretion of eggs and larvae of zooparasites from the body of definitive hosts and ways of their infection.** The release of oocysts , eggs and larvae of zooparasites from the body of the definitive host into the environment depending on the stage of development of pathogens of invasive diseases and their localization. Features of biological contamination of the environment by oocysts , eggs and larvae of zooparasites . Factors of infection of animals and humans with pathogens of		4	**Ways of excretion of eggs and larvae of zooparasites from the body of definitive hosts and ways of their infection.** Epizootological, epidemiological and clinical examination of animals and humans for parasitosis . Factors affecting the contamination of environmental objects with oocysts , eggs and larvae of zooparasites . Shelf life of pathogens of invasive diseases in the environment	14	1,2,3,4,5,6,7,8,10,11,

anthropozoonoses. Ways of infection of animals and humans with pathogens of invasive diseases.					
Topic 4. **Parasitological studies of animals.** Methods of parasitological research, factors influencing their effectiveness. Equipment and materials for parasitological research. Rational terms for conducting parasitological research on animals.		4	**Parasitological studies of animals.** Study of factors affecting efficiency parasitological studies. Research of environmental objects for contamination with helminth larvae and eggs.	14	1,2,3,4,5,8,9,10,11,12,13
Topic 5. **Ecological and biological features of trematodes , cestodes** Biology of trematodes , cestodes , their fecundity. Biological pollution of the environment with eggs of trematodes and cestodes . Disinfestation of environmental objects. Environmental prevention of helminthiasis in small animals.		4	**Ecological and biological features of trematodes , cestodes** Ecological and biological features opisthorchiasis , Ecological and biological features tapeworm , dipylidium , echinococcus, diphyllobothrium	14	3,4,5,6,7,8,9,,12,13
Topic 6. **Ecological and biological features of nematodes .** Biology of nematodes. Their fertility. Biological pollution of the environment with nematode eggs and larvae. Environmental prevention of helminthiasis in small animals		4	**Ecological and biological features of nematodes .** Ecological and biological features of Toxocara , Unicularia , Hookworms , Trichuris , Angiostrongylidae , Dirofilaria .	14	1,2,3,4,5,6,11,12,13
Topic 7. **Ecological and biological features of mites, insects and protozoa.** Biological features of mites, insects, and protozoa. Biological pollution of the environment with tick eggs and protozoan oocysts .			**Ecological and biological features of mites, insects and protozoa.** Ecological and biological features of parasites of phylum and acariform mites, bloodsuckers. Ecological and biological features of babesia, toxoplasma , giardia, isospores .	14	1,2,3,4,5,6,7,10,11,
Topic 8. **Ways of excretion of oocysts , eggs and**		4	**Ways of excretion of oocysts , eggs and larvae of parasites from the host's body.** Ways of infection of animals and humans with	18	1,3,4,5,6,7,8,9,,12,13

larvae of parasites from the host's body. Features of biological pollution of the environment by invasive elements of zooparasites . Ways of infection of animals and humans with pathogens of invasive diseases. Sources, ways of spread and factors of environmental pollution by pathogens of invasive diseases			pathogens of invasive diseases : alimentary, waterborne, sexual, contact-household, transplacental, hemotransfusion and contamination .		
Topic 9 . **Parasitological studies of animals.** Methods of parasitological research of small animals. Research on helminthiasis in small animals. Research on small animals for protozoal diseases. Acarological and entomological studies of small animals		2	**Parasitological studies of animals.** Development of helminthoscopy and coproovoscopic research methods. Methods of researching small animals for acariasis and entomosis .	4	1,2,3,4,5,6,11,12,13
Topic 10 . **Parasitological studies of environmental objects.** soil , water, and feces samples . Research of scraping samples from the animal's housing facilities. Factors influencing parasitological studies of environmental objects .		4	**Parasitological studies of environmental objects.** Research methods samples of feed, soil , water, feces and samples from scrapings of the animal's housing facilities. Investigation of environmental objects for the presence of locations of temporary ectoparasites.	4	1,2,3,4,5,6,7,8,10,11
Topic 11 . **Parasitological studies of intermediate and reservoir hosts of zooparasites .** The role of vertebrates and invertebrates as intermediate hosts of helminths. The role of intermediate hosts of helminths in the spread of invasive diseases, determining the extensiveness and intensity of invasion.		2	**Parasitological studies of intermediate and reservoir hosts of zooparasites .** Methods for examining ticks, beetles, and blood-sucking insects for the presence of intermediate stages of zooparasite development .	4	1,2,3,4,5,6,11,12,13
Total		38		112	

5. EVALUATION BY EDUCATIONAL COMPONENT

5.1.Diagnostic assessment (indicated as needed)

5.2.Summative assessment

5.2.1. To assess the expected learning outcomes, there are

No.	Summative assessment methods	Points / Weight in the overall score	Date of compilation
1.	Thematic survey	*15 points / 15%*	Weekly
2.	Completing tasks in the workbook during laboratory classes	*20 points / 20%*	According to the schedule
3.	Completion of independent tasks in a workbook . Report with a presentation on the topic of independent study of the discipline	*30 points / 30%*	According to the module delivery schedule
4.	Multiple choice testing	*35 points / 35%*	According to the schedule

5.2.2. Evaluation criteria

Component[1]	**Unsatisfactorily**	**Satisfactorily**	**Good**	**Perfectly**[2]
	<8 points	*8-12 points*	*13-14 points*	*15 points*
Thematic survey	only play individual fragments from the course.	The student has certain knowledge provided for in the discipline program, possesses the basic provisions studied at a level defined as the minimum acceptable	The student generally has a good command of the material, knows the main provisions of the material, makes an analysis of possible situations based on them and is able to apply them when solving typical practical tasks, but allows for some	The student demonstrates complete and solid knowledge of the educational material in the volume that corresponds to the discipline program, correctly and reasonably makes the necessary decisions in various non-standard

[1]Specify the summative assessment component

[2]Indicate the distribution of points and the criteria that determine the level of assessment

			inaccuracies.	situations.
	<12 points	*12-15*	*15-18 points*	*20 points*
Completing tasks in the workbook during laboratory classes	His knowledge at the final stages of learning is fragmentary. Does not provide practical implementation of tasks that are formed during the study of the discipline. The student is not allowed to take the test.	Using basic theoretical provisions, the student has difficulty explaining the rules for solving practical/calculation problems of the discipline. The performance of practical/individual/test tasks is significantly formalized: there is compliance with the algorithm, but there is no deep understanding of the work	The student has mastered the basic material, understands the solution of standard practical tasks, has suggestions for the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar tasks based on those discussed with the teacher, but allows a small number of inaccuracies	Able to implement the theoretical provisions of the discipline in practical calculations, analyze and compare data from objects of activity of this profession on the basis of knowledge and skills acquired from this discipline
	<15 points	*15-25*	*25-28 points*	*30 points*
Completion of independent tasks in a workbook . Report with a presentation on the topic of independent study of the discipline	The student lacks a complete understanding of the subject material. The student is not prepared to independently solve the problems outlined in the goal and objectives of the discipline.	Despite the fact that the student completed the program of the academic discipline, he worked passively, his answers during individual / test work are mostly incorrect, unfounded	Knows the characteristics of the main provisions that are of decisive importance in Performing individual/test tasks and explaining decisions made within the discipline being studied. Errors in answers/solutions/calculations are not systemic.	When performing individual tasks, he demonstrated the ability to independently solve the assigned tasks.

	<10 points	*20-25 points*	*25- 30 points*	*35 points*
Multiple choice testing	The student gives the correct answer to several questions (≤ 33% of correct answers).	The student has certain knowledge provided for in the discipline program, knows the main provisions being studied, and gives the correct answer to several questions (34–59% of correct answers).	The student generally has a good command of the material, knows the main points of the material, and gives the correct answer to several questions (60–89% of correct answers).	The student demonstrates complete and solid knowledge of the educational material in the volume that corresponds to the discipline program, correctly answers the test questions (90–100% of correct answers).

5.3.Formative assessment:

To assess current progress in learning and understand areas for further improvement,

No.	**Elements of normative assessment**	**Date**
1	Written survey after studying topics 1-3	3 week
	Written survey after studying topics 4-8	5week
3	Written feedback from the teacher while working on practical tasks during classes	Within 1 week after execution
4	Oral feedback from the teacher after the presentation on the topic of independent study of the discipline	During the lesson

6. LEARNING RESOURCES (LITERATURE)

6.1.Main sources

Methodological support

1. Kasyanenko O.I., Negreba Yu.V., Rysovany V.I., Mazur I.Ya. Laboratory diagnostics of animal parasitosis . Methodological guidelines for independent, individual work for students of 3,4,5 years of educational program 26 "Parasitology and invasive diseases of animals", full-time education, educational degree "master" 24s. Protocol No. 2 dated 11.11.2024.

2. Kasyanenko O.I., Negreba Yu.V., Rysovany V.I. Laboratory diagnostics of zoonotic diseases of productive animals. Methodological guidelines for independent, individual work for students of

3,4,5 courses of the educational program 211 "Veterinary Medicine" of the OPN "Veterinary Hygiene, Sanitation and Expertise", full-time study, educational degree "Master". 29 p. Protocol No. 2 dated 11.11.2024.

3. Kasyanenko I. O., Negreba Yu. V., Kasyanenko S. M. Helminthiasis of productive animals. Textbook. Sumy: SNAU 2025. –245 p. Approved by the Academic Council of Sumy National Agrarian University (Minutes No. 20 dated May 26, 2025).

Recommended reading
Basic

4. Nevyadomskaya K. General Parasitology. K.: "Scientific Opinion". - Kyiv, 2006. - 483 p.

5. Galat V.F., A.V., Prus M.P., Soroka N.M. Parasitology and Invasive Animal Diseases: Textbook; ed. V.F. Galata K.: Higher Education, 2003.– 464 p.

6. Galat V.F., Berezovsky A.V., Prus M.P., Soroka N.M. Parasitology and invasive animal diseases. Practical course: Textbook . Kyiv: Higher Education, 2004. – 238 p.

7. Dakhno I.S., Galat V.F., Berezovsky A.V., Prus M.P., Soroka N.M. Atlas of animal helminths. Kyiv: Vetinform , – 2001. – 118 p.

8. Dakhno I.S., Dakhno Yu.I. Ecological helminthology: Textbook . Sumy: Kozatskyi val, 2010. – 220 p.

9. Prykhodko Yu.O., Ponomar S.L., Mazannyi O.V., Nikiforova O.V., Antipov A.A., Goncharenko V.P. Parasitology and invasive animal diseases Workshop (for independent work). Bila Tserkva.: OOO " Bila Tserkivdruk ". 2011. 312p.

6.2. Additional sources

10. Verbytskyi P.I., Dostoevsky. P.I. Handbook of veterinary medicine. Kyiv.: Urozhay, 2004. 1280 p.
11. Galat V.F., Berezovsky A.V., Soroka N.M. Prus M.P. Invasive diseases of pigs: Educational. Kyiv.: NAU, 2006. 94 p.
12. Galat V.F., Berezovsky A.V., Soroka N.M. Prus M.P. Invasive diseases of horses: Textbook . Kyiv: NAU, 2008. 154 p.
13. Boch J., Supperer R. Veterinarme dizinische Parasitologic . Berlin and Hamburg : Publisher Paul Parey , 2002. 906 p.
14. Monitoring of canine heartworm disease in Sumy region. *Scientific and technical bulletin of the National Institute of Veterinary Medicine and Feed Additives.* Lviv 23 (1). 98-104. doi : 10.36359/scivp.2022-23-1.14
15. . Evstafieva, V. O.; Kasyanenko , O. I.; Negreba , Y. V.; Kyrychko , B. P.; Levytska, V. A.; Gavryk, K. A. Ovocide efficacy of the disinfectant Germecide -BC against eggs of Trichuris nematodes spp . isolated from cattle. Scientific Messenger of Lviv National

University of Veterinary Medicine & Biotechnologies Series : Veterinary Sciences , 2023, Vol 25, Issue 110, DOI 10.32718/nvlvet11018
16. Fotina , T., Yarmoshenko , Yu ., Dudnyk , Ye ., Kovalenko , L., & Negreba , Y. (2024). Results iodine-based treatment application in carp aquaculture within closed water systems . Scientific Horizons , 27(9), 20-31. doi : 10.48077/scihor9.2024.20.
17. . Kasyanenko , O. I.; Negreba , Yu. V.; Kasyanenko , O. I. Determination of the effectiveness of the veterinary drug "VORMIKIL paste" in helminthic invasion in carnivorous animals. Bulletin of the Sumy National Agrarian University. Series "Veterinary Medicine", issue 1 (64), 2024, 30-36, DOI https://doi.org/10.32782/bsnau.vet.2024.1.5
18. Panasenko O.S.; Nazarenko S.M., Rysovany V.I., *Negreba* , Yu. V.; Ivashyna K.V. Prevalence of eymeriosis associations rabbits in the Sumy region, and pathomorphological assessment. Bulletin of the Sumy National Agrarian University. Series "Veterinary Medicine", issue 4 (67), 2024, 77-83. doi : https://doi.org/10.32782/bsnau.vet.2024.4.11

6.3.Software

- Computers with software for practical work
- Microsoft PowerPoint – Data Visualization MicrosoftPower BI – Data Analytics and Visualization
- Multimedia projector, flipchart and screen;
- Moodle distance learning and monitoring system