

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

**Work program ( syllabus ) of the educational component  
General and special measures for invasive diseases**

obligatory

(required / optional)

Implemented within the educational program

**"Veterinary medicine"**


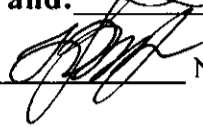
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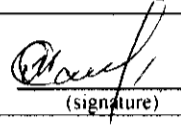
in specialty 211 " Veterinary Medicine "

(code, name)

on the other ( master's ) level of higher education

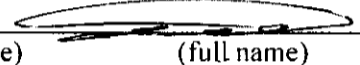
Amounts – 2023

**Developer and:**  Risovansy V. I., Ph.D., Art. teacher  
 (signature)  
 Negreba Yu. V., st. teacher  
 (signature)

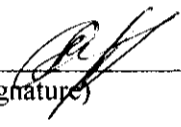
Considered, approved and approved at the meeting of the department of pizootology and parasitology (name of the department)	Minutes of June 19, 2023, №20	
	The head Departments	<u></u> (signature)


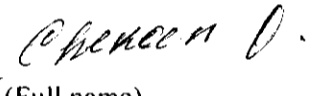
**Kasianenko O.I.**  
 (surname, initials)

**Agreed:**

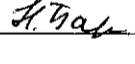
Guarantor of the educational program   
 (signature) (full name)

Dean of the faculty where the educational program is implemented

 Nechiporenko O.L.  
 (signature) (full name)

Work program review (attached) provided:    
 (Full name)

\_\_\_\_\_  
(Full name)

Methodist of the Department of Education Quality,  
 licensing and accreditation  (N. Baranik)  
 (signature) (full name)

Registered in the electronic database: date: 30.06. 2023.

Information on viewing the work program ( syllabus ):

Academic year in which changes are made	The number of the appendix 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. GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

1.	Name OK	General and special measures for invasive diseases			
2.	Faculty / department	Faculty of Veterinary Medicine / Department of Epizootology and Parasitology			
3.	Status OK	Basic			
4.	Program / Specialty (programs), the component of which is OK for ( <i>to be filled in for mandatory OK</i> )	211 Veterinary medicine			
5.	OK can be suggested for (to be <i>filled in for selective OK</i> )				
6.	NRC level	Level 7			
7.	Semester and duration of study	9 semester, 15 weeks			
8.	Number of ECTS credits	4.0			
9.	The total number of hours and their distribution	Contact work (classes)			Individual work
		Lectures	Practical / seminar	Laboratory	
		8		14	98
10.	Language of instruction	English			
11.	Teacher / Coordinator of the educational component	Candidate of Veterinary Sciences , Art. teacher Rysovany VI			
11.1	Contact Information	Corp. _ 3 , office 62, Risovansy V. I. e-mail: 0963007430; viber 0974706536 <a href="mailto:rvisu@ukr.net">rvisu@ukr.net</a> Negreba Yu.V.- corp . 3 , office 62, tel .: 09 89498577 ; viber 0662967712 <a href="mailto:Yla7578@ukr.net">Yla7578@ukr.net</a> ;			
12.	General description of the educational component	The educational component studies the main parasitic diseases of animals, methods of lifelong and postmortem diagnosis of parasitosis of animals, treatment of animals with diseases, as well as prevention and control of diseases of parasitic etiology.			
13.	The purpose of the educational component	<b>The purpose</b> teaching the discipline is to teach students to study the objects of the environment, to study the parasitological situation and to conduct bioecological methods of prevention of parasitosis in farms of various forms of ownership.			
14.	Prerequisites for studying OK, the relationship with other educational components of OP	veterinary specialist . The educational component is based on the study of OK: ecology, physiology, zoology and anatomy of animals, parasitology and invasive diseases , bioecological zooparasitology , animal parasitosis , etc.			
15.	The policy of academic integrity	dishonesty are allowed during the study of OK . <a href="#">Plagiarism check algorithm</a> systems are also tools for counteracting violations of academic integrity . In case of violations, the response is in accordance with the regulations on the academic integrity of participants in the educational process in Sumy NAU (			

	<a href="https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/">https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/</a> ). If a violation of academic integrity is detected, the completed task is not credited and is sent for re-execution.
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## 2. LEARNING OUTCOMES OF THE EDUCATIONAL COMPONENT AND THEIR RELATIONSHIP WITH THE SOFTWARE LEARNING OUTCOMES

<b>OK learning outcomes:</b> After studying the educational component, the student is expected to be able to... »	Program learning outcomes to be achieved by the OK (number according to the numbering given in the OP)										As estimated by the DRN
	PRN 1. To diagnose animal diseases.	PRN 2. To diagnose animal diseases.	PRN 3. To diagnose animal diseases.	PRN 4. To diagnose animal diseases.	PRN 6. To diagnose animal diseases.	PRN 7. To diagnose animal diseases.	PRN 8. Apply tools and hardware.	PRN 9 Analyze research results.	PRN 10. Implement medical measures.	PRN 11. Develop prevention strategies.	
<b>DRN 1</b> Have general and special measures for helminthiasis of animals	+	+	+	+		+	+	+	+		– survey of theoretical issues, – performing tasks in practical classes, – testing, performing tasks of independent work
<b>DRN 2.</b> Have general and special measures for animal diseases caused by ectoparasites		+	+	+	+			+	+	+	– survey of theoretical issues, – performing tasks in practical classes, – testing, performing tasks of independent work
<b>DRN 3.</b> Have general and special measures for animal diseases .		+		+	+	+	+	+		+	– survey of theoretical issues, – performing tasks in practical classes, – testing, performing tasks of 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 total time budget				Recommended Books from the list in paragraph 6
	Classroom work			CPC	
	Luke	PZ	Lab .		
1 semester					
<b>Topic 1.</b> General and special measures for animal trematodes. Epizootological data. Development cycles. Pathogenesis. Clinical signs. Treatment. Control measures.	2	2	Trematodes of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. General and special measures for animal trematodes.	16	1,2,3,4,7,8,9,10,12,13
<b>Topic 2.</b> General and special measures for cestodes of animals. Epizootological data. Development cycles. Pathogenesis. Clinical signs. Treatment. Control measures.	-	2	Cestodes of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. General and special measures for cestodes of animals.	16	1,2,3,5,6,7,12,13
<b>Topic 3.</b> General and special measures for nematodes of animals. Epizootological data. Development cycles. Pathogenesis. Clinical signs. Treatment. Control measures.	2	2	nematodes . Characteristics of pathogens. Morphological features. Diagnosis of diseases. General and special measures for nematodes of animals.	16	3,4,5,6,7,8,9,10,12,13
2nd semester					
<b>Topic 4.</b> General and special measures for animal entomoses . Epizootological data. Development cycles. Pathogenesis. Clinical signs. Control measures.	-	4	Entomoses of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. General and special measures for animal entomoses .	18	1,2,3,4,5,6,7,12,13
<b>Topic 5.</b> Veterinary technologies for the prevention of animal acarosis . Epizootological data. Development cycles. Pathogenesis. Clinical signs. Treatment. Control measures.	2	2	Acarosis of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. General and special measures for animal acarosis .	16	1,2,3,4,5,6,7,9,10,
<b>Topic 6.</b> General and special measures for protozoan animals. Epizootological data. Development cycles. Pathogenesis. Clinical signs. Treatment. Prevention and control	2	2	Protozoa of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. General and special measures for protozoan animals.	16	3,4,5,6,7,10,11,12,13

measures.				
<b>Total</b>	8	14		142

#### 4. METHODS OF TEACHING AND TEACHING

DRN	Teaching methods (work to be done by the teacher <u>during classes</u> , consultations)	Number of hours	Teaching methods (what types of educational activities the student must perform <u>independently</u> )	Number of hours
DRN 1. Have general and special measures for helminthiasis of animals	<p><b>Methods of teaching by source of knowledge:</b>  <i>Verbal:</i> story, explanation, conversation (heuristic and reproductive), lecture, instruction.  <i>Visual:</i> demonstration, illustration, observation.  <b>Active methods:</b> (use of technical teaching aids, use of training and control tests)  <b>Interactive teaching methods:</b> (use of multimedia technologies, spreadsheets.</p>	6	<p><b>Methods of teaching by source of knowledge:</b>  <i>Verbal :</i> work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), <i>Visual :</i> observation.  <b>Teaching methods by the nature of the logic of cognition</b> ( <i>analytical, synthesis methods, and inductive method, deductive method, translational method</i> ).  <b>Active methods</b> ( brainstorming, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research ).  <b>Interactive learning technologies</b> ( use of multimedia technologies, dialogue training, cooperation of students (cooperation)</p>	32
DRN 2. Have general and special measures for diseases animals caused by ectoparasites	<p><b>Methods of teaching by source of knowledge:</b>  <i>Verbal:</i> story, explanation, conversation (heuristic and reproductive), lecture, instruction.  <i>Visual:</i> demonstration, illustration, observation.  <b>Active methods:</b> (use of technical teaching aids, use of training and control tests)  <b>Interactive teaching methods:</b> (use of multimedia technologies, spreadsheets.</p>	8	<p><b>Methods of teaching by source of knowledge:</b>  <i>Verbal :</i> work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), <i>Visual :</i> observation.  <b>Teaching methods by the nature of the logic of cognition</b> ( <i>analytical, synthesis methods, and inductive method, deductive method, translational method</i> ).  <b>Active methods</b> ( brainstorming, crossword puzzles, debates, round tables, binary classes, business and</p>	32

			role-playing games, group research ). <b>Interactive learning technologies</b> ( use of multimedia technologies, dialogue training, cooperation of students (cooperation) ).	
DRN 3 Have general and special measures for protozoan diseases of animals	<b>Methods of teaching by source of knowledge:</b> <i>Verbal:</i> story, explanation, conversation (heuristic and reproductive), lecture, instruction. <i>Visual:</i> demonstration, illustration, observation. <b>Active methods:</b> (use of technical teaching aids, use of training and control tests) <b>Interactive teaching methods:</b> (use of multimedia technologies, spreadsheets.	8	<b>Methods of teaching by source of knowledge:</b> <i>Verbal :</i> work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), <i>Visual :</i> observation. <b>Teaching methods by the nature of the logic of cognition</b> ( <i>analytical, synthesis methods, and inductive method, deductive method, translational method</i> ). <b>Active methods</b> ( brainstorming, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research ). <b>Interactive learning technologies</b> ( use of multimedia technologies, dialogue training, cooperation of students (cooperation)	34

## 5. EVALUATION BY EDUCATIONAL COMPONENT

### 5.1. Diagnostic evaluation (*indicated if necessary*)

Computer testing for knowledge of pathogens of invasive diseases, methods of their indication, as well as pathogenesis, clinical and pathological features of major parasitic diseases and other issues on which the study of OK is based. The grade is not issued.

### 5.2. Summative assessment

#### 5.2.1. To assess the expected learning outcomes provided

№	Methods of summative evaluation	Points / Weight in the overall score	Date of compilation
1.	Assessment of the ability to prepare and select material for laboratory tests, to compile an accompanying document	5/5%	By the end of 2 weeks
2.	Assessment of the ability to prepare and deworm animals / poultry (based on vivarium) and draw up an act.	5/5%	By the end of 3 weeks
3.	The decision of problems on calculation of needs of means for carrying out disinvasion and drawing up of the act of the carried-out works	5/5%	By the end of 6 weeks
4.	Decisions on the ability to navigate in the range of anthelmintics , insecticides and disinfectants . Debate	10/10%	In the 7th lesson
5.	Simulation exercise " Veterinary technologies for the prevention of helminthiasis of animals "	10/10%	By the end of the 8th



			week
6.	Simulation exercise " Veterinary technologies for the prevention of arachnoid animals "	10/10%	In the 9th lesson
7.	Simulation exercise " Veterinary technologies for the prevention of animal entomoses "	10/10%	In the 10th lesson
8.	Simulation exercise " Veterinary technologies for the prevention of animal protozoa "	10/10%	In the 12th lesson
9.	Plan of antiparasitic measures to eliminate the disease (by options)		By the end of the 15th week
10	Multiple choice testing	35/35%	According to the schedule
	Together	100/100%	

### 5.2.2. Evaluation criteria

<b>Component</b>	<b>Unsatisfactorily</b>	<b>Satisfactorily</b>	<b>Fine</b>	<b>Perfectly</b>
Assessment of the ability to prepare and select material for laboratory tests, to compile an accompanying document	0-2	3	4	5
	<i>The procedure is not oriented</i>	<i>The sequence of the procedure is not followed exactly, the document is made with gross errors</i>	<i>The procedure is correctly performed on the object, the document is made with inaccuracies</i>	<i>The procedure is explained in detail and correctly performed on site, the documents are compiled without errors</i>
Assessment of the ability to prepare and carry out deworming of animals / poultry (based on vivarium) and draw up an act.	0-2	3	4	5
	<i>The procedure is not oriented</i>	<i>The sequence of the procedure is followed with gross errors</i>	<i>The procedure is performed correctly on the object</i>	<i>The procedure is explained in detail and correctly performed on a living object</i>
The decision of problems on calculation of needs of means for carrying out disinvasion and drawing up of the act of the carried-out works	0-2	3	4	5
	<i>The problem is solved incorrectly</i>	<i>The problem is generally solved, but with gross errors</i>	<i>The calculation was carried out correctly, the act was drawn up</i>	<i>The requirements of the task are met, while demonstrating creativity and thoughtfulness</i>
Test your ability to navigate in the range of anthelmintics , insecticides and disinfectants	0-2	3	4	5
	<i>Task requirements not met</i>	<i>Most of the requirements are met, but some components are missing or insufficiently disclosed</i>	<i>All requirements of the task with insignificant inaccuracies are fulfilled</i>	<i>The requirements of the task are met, while demonstrating creativity and thoughtfulness</i>
Simulation exercise on topics with the distribution of points on the basis of mutual evaluation	0-4	5-7	8-9	10
	<i>Role not completed</i>	<i>The role is generally fulfilled, with hints and corrections</i>	<i>The role is fulfilled, knowledge of the instruction on fight against illness is shown, uncertainty is shown</i>	<i>The role is performed with creativity, demonstrated knowledge of instructions for combating the disease, the ability to communicate, argue and show determination in defending their position,</i>
Plan of antiparasitic measures to eliminate the disease (by options)	0-4	5-7	8-9	10
	<i>Task requirements not met</i>	<i>Most of the requirements are met, but some components are missing or insufficiently disclosed</i>	<i>All requirements of the task are fulfilled with insignificant inaccuracies</i>	<i>The requirements of the task are met, while demonstrating creativity and thoughtfulness</i>

### 5.3. Formative assessment:

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

<b>№</b>	<b>Elements of formative assessment</b>	<b>Date</b>
1	Feedback aimed at supporting the student in understanding the correctness of the documentation	Each time you check the completed acts and accompanying
2	Self-test for knowledge of the sequence of actions when performing procedures (diagnostic, preventive, veterinary)	Blitz control at the beginning of classes

	- sanitary) based on the results of the analysis of performed blitz tasks	
3	Evaluation of the activity and effectiveness of applicants' participation in focus groups and role-playing in simulation exercises. Comments and tips.	Each time in the form of focus groups or simulation exercises
4	Feedback with comments and recommendations on how to solve problems	13th week
5	Oral review and correction of plans for antiparasitic measures to eliminate the disease (by options)	According to the schedule by topics

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

## **6. LEARNING RESOURCES (LITERATURE)**

### ***6.1.The main sources***

#### **Methodical support**

1. Kasyanenko OI, Rysovany VI, Negreba Yu.V. Lazorenko LM, Textbook for laboratory - practical classes and independent work of students in parasitology and invasive animal diseases. Sumy NAU. Sumy, 2020. - 140 p.
2. Drawn VI, Negreba YV, Lazorenko LM, Parasitology and invasive animal diseases. Workbook for laboratory-practical and independent classes Part 1 Veterinary helminthology. For students majoring in 211 "Veterinary Medicine" and 212 "Veterinary Hygiene, Sanitation and Expertise" full-time .87 p.
3. Kasyanenko OI, Risovany VI, Negreba YV B. Bioecological zooparasitology . Methodical instructions on conducting laboratory - practical and independent classes for students of the Faculty of Veterinary Medicine full - time educational degree "Master". Sumy. 2022. - \_24 p.

#### **Recommended Books**

##### **Basic**

4. Secretary KV Fundamentals of ecological zooparasitology . Lviv, 2007. - 358 p.
5. Unknown K..General parasitology. K .: "Scientific thought". - Kyiv, 2006. - 483 p.
6. Galat VF, Berezovsky AV, Prus MP, Soroka NM Parasitology and invasive diseases of animals: Textbook; for ed .. V.F. Galata K .: Higher Education , 2003.– 464 p.
7. Galat VF, Berezovsky AV, Prus MP, Soroka NM Parasitology and invasive animal diseases. Workshop: Teaching . manual. K .: Higher education , 2004. - 238 p.
8. Dakhno IS, Galat VF, Berezovsky AV, Prus MP, Soroka NM Atlas of animal helminths. K .: Vetinform , - 2001. - 118 p.
10. Dakhno IS, Dakhno YI Ecological helminthology: Textbook . manual. Sumy: Kozatsky Val, 2010. - 220 p.
11. Prikhodko YO, Ponomar SL, Mazanny OV, Nikiforova OV, Antipov AA, Goncharenko VP Parasitology and invasive diseases of animals Workshop (for independent work). Bila Tserkva .: Belotserkivdruk LLC . 2011. 312p.

### ***6.2.Additional sources***

12. Verbitsky PI, Dostoevsky. P.I. Handbook of Veterinary Medicine. Kyiv .: Urozhay, 2004. 1280 p.

13. Galat VF, Berezovsky AV, Soroka NM Prus MP Invasive swine diseases : Educational . Kyiv .: NAU, 2006. 94 p.
14. Galat VF, Berezovsky AV, Soroka NM Prus MP Invasive diseases of horses: Educational manual . Kyiv .: NAU, 2008. 154 p.
15. Boch J., Supperer R. Veterinarmedizinische Parasitologie . Berlin and Hamburg . : Verlag Paul Parey , 2002. 906 p
16. Yatusевич AI, Galat VF, Berezovsky AV A guide to veterinary parasitologists. Minsk : Tehnoperspektiva , 2007. - 482 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

