

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
Veterinary technologies for the prevention of parasitic diseases of
animals**

mandatory

(mandatory / optional)

It is implemented within the educational program

"Veterinary Medicine"

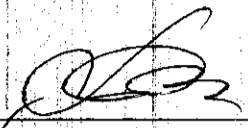
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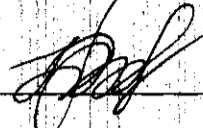
in specialty 211 " Veterinary Medicine "

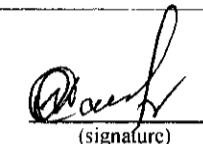
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on the second (master's) level of higher education


Sumy - 2023

Developer and:  V.I. Risovany, PhD, associate professor

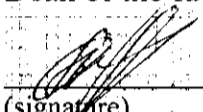
(signature)  Negreba Yu.V., art. teacher
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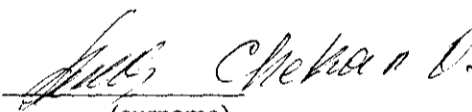
| | | |
|--|-------------------------------------|--|
| Considered, approved and approved at the meeting of the department epizootology and parasitology (name of department) | protocol dated June 19, 2023 No. 20 | |
| | Head Chairs |  Kasianenko O.I. (signature) (surname, initials) |

Agreed:

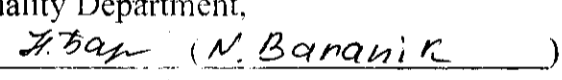
Guarantor of the educational program 
(signature) (surname)

Dean of the faculty where the educational program is implemented

 Nechiporenko O.L.
(signature) (surname)

Review of the work program (attached) provided by: 
(signature) (surname)

(surname)

Methodist of the Education Quality Department,
licensing and accreditation 
(signature) (surname)

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

Information on viewing the work program (syllabus):

| The academic year in which the changes are made | The number of the annex to the work program with a description of the changes | The changes were reviewed and approved | | |
|---|---|--|--------------------|--------------------------------------|
| | | Date and number of the protocol of the meeting of the department | Head of Department | Guarantor of the educational program |
| | | | | |

1. GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

| | | | | | |
|------|--|--|-------------------|------------|------------------|
| 1. | The name is OK | Veterinary technologies for the prevention of parasitic diseases of animals | | | |
| 2. | Faculty/department | Faculty of Veterinary Medicine / Department of Epizootology and Parasitology | | | |
| 3. | The status is OK | The main one | | | |
| 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 offered for (<i>to be filled in for selective OKs</i>) | | | | |
| 6. | NRK level | 7th level | | | |
| 7. | Semester and duration of study | 12th semester, 15 weeks | | | |
| 8. | Number of ECTS credits | 4.0 | | | |
| 9. | The total number of hours and their distribution | Contact work (class) | | | Independent work |
| | | Lectures | Practical/seminar | Laboratory | |
| | | 6 | | 8 | 106 |
| 10. | Language of education | English | | | |
| 11. | Teacher/Coordinator of the educational component | Candidate of Veterinary Sciences , art. teacher V.I. Rysovany | | | |
| 11.1 | Contact Information | Corp. _ 3 , room 62, Drawn by V.I. e-mail: 0963007430; viber 0974706536 rvisu@ukr.net Negreba Yu.V. - corp . 3 , room 62, phone: 09 89498577 ; viber 0662967712 Yla7578@ukr.net ; | | | |
| 12. | General description of the educational component | The educational component studies the main parasitic diseases of animals, methods of lifelong and postmortem diagnosis of animal parasitosis , treatment of animals with diseases, as well as prevention and control measures for diseases of parasitic etiology. | | | |
| 13. | The purpose of the educational component | the purpose teaching of the academic discipline is to teach students to investigate environmental objects, to study the parasitological situation and to carry out bioecological methods of parasitosis prevention in farms of various forms of ownership. | | | |
| 14. | Prerequisites for studying OK, connection with other educational components of OP | OK is important in the training of a specialist in veterinary medicine. The educational component is based on the study of OK: ecology, physiology, animal zoology and anatomy, parasitology and invasive diseases , bioecological zooparasitology , animal parasitosis , etc. | | | |
| 15. | Policy of academic integrity | Any manifestations of academic dishonesty are not allowed during the study of OK . Plagiarism check algorithm systems are tools for combating violations of academic integrity . In case of violations, the response takes place in accordance with the regulatory documentation regarding the | | | |

| | | |
|-----|---|---|
| | | academic integrity of the participants of the educational process at the Sumy National University (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 counted and sent for re-execution. |
| 16. | Link to the course in the Moodle system | https://cdn.snau.edu.ua/moodle/course/view.php?id=4150 |

2. LEARNING RESULTS UNDER THE EDUCATIONAL COMPONENT AND THEIR RELATIONSHIP WITH PROGRAM LEARNING OUTCOMES

| Study results for OK: After studying the educational component, the student is expected to be able to..." | Program learning outcomes, which are aimed at achieving the OK (number according to the numbering given in the OP) | | | | | | | | | | How the DRN is evaluated |
|--|--|--|--|--|--|--|---|---------------------------------|--|--|---|
| | PRN 1. Carry out diagnostics of animal diseases. | PRN 2. Carry out diagnostics of animal diseases. | PRN 3. Carry out diagnostics of animal diseases. | PRN 4. Carry out diagnostics of animal diseases. | PRN 6. Carry out diagnostics of animal diseases. | PRN 7. Carry out diagnostics of animal diseases. | PRN 8. Apply tools and technical means. | PRN 9 Analyze research results. | PRN 10. To implement medical measures. | PRN 11. Develop prevention strategies. | |
| DRN 1 To have veterinary technologies for the prevention of animal helminthiasis | + | + | + | + | | + | + | + | + | | <ul style="list-style-type: none"> - poll theoretical questions , - implementation tasks on practical ones classes , - testing , performance of tasks of independent work |
| DRN 2. To have veterinary technologies for the prevention of animal diseases caused by ectoparasites | | + | + | + | + | | | + | + | + | <ul style="list-style-type: none"> - poll theoretical questions , - implementation tasks on practical ones classes , - testing , performance of tasks of independent work |
| DRN 3. To have veterinary technologies for the prevention of animal protozoan diseases . | | + | + | + | + | + | + | + | | + | <ul style="list-style-type: none"> - poll theoretical questions , - implementation tasks on practical ones classes , - testing , performance of tasks of independent work |

3. CONTENTS OF THE EDUCATIONAL COMPONENT (COURSE PROGRAM)

| Topic. List of issues to be considered within the topic | Distribution within the general time budget | | | | Recommended Books from the list in point 6 |
|---|---|--------------|--|-----|---|
| | Auditory work | | | SRS | |
| | Lk | softwar e | Lab . | | |
| 1 semester | | | | | |
| Topic 1. Veterinary technologies for the prevention of animal trematodes. Epizootological data. Cycles of development. Pathogenesis. Clinical signs. Treatment. Measures of struggle. | 2 | 2 | Tramvtodoses of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. Veterinary technologies for the prevention of animal trematodes. | 18 | 1,2,3,4,7,8,9,10,12,13 |
| Topic 2. Veterinary technologies for the prevention of cestodoses of animals. Epizootological data. Cycles of development. Pathogenesis. Clinical signs. Treatment. Measures of struggle. | | 2 | Cestodoses of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. Veterinary technologies for the prevention of cestodoses of animals. | 18 | 1,2,3,5,6,7,12,13 |
| Topic 3. Veterinary technologies for the prevention of animal nematodes . Epizootological data. Cycles of development. Pathogenesis. Clinical signs. Treatment. Measures of struggle. | 2 | | nematodes . Characteristics of pathogens. Morphological features. Diagnosis of diseases. Veterinary technologies for the prevention of animal nematodes . | 18 | 3,4,5,6,7,8,9,10,12,13 |
| Topic 4. Veterinary technologies for the prevention of animal entomosis . Epizootological data. Cycles of development. Pathogenesis. Clinical signs. Measures of struggle. | | 2 | Entomoses of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. Veterinary technologies for the prevention of animal entomosis . | 18 | 1,2,3,4,5,6,7,12,13 |
| Topic 5. Veterinary technologies for the prevention of animal acarosis . Epizootological data. Cycles of development. Pathogenesis. Clinical signs. Treatment. Measures of struggle. | 2 | | Akarosis of animals. Characteristics of pathogens. Morphological features. Diagnosis of diseases. Veterinary technologies for the prevention of animal acarosis . | 18 | 1,2,3,4,5,6,7,9,10, |
| Topic 6. Veterinary technologies for the prevention of animal protozoa . Epizootological data. Cycles of development. | | 2 | protozoa . Characteristics of pathogens. Morphological features. Diagnosis of diseases. Veterinary technologies for the prevention of animal protozoa . | 16 | 3,4,5,6,7,10,11,12,13 |

| | | | | |
|---|---|---|--|-----|
| Pathogenesis. Clinical signs. Treatment. Prevention and control measures. | | | | |
| In total | 6 | 8 | | 106 |

4. TEACHING AND LEARNING METHODS

| DRN | Teaching methods (work to be carried out by the teacher <u>during classroom classes</u> , consultations) | Number of hours | Learning methods (what types of learning activities should be performed by <u>the student independently</u>) | Number of hours |
|---|---|-----------------|--|-----------------|
| DRN 1. To have veterinary technologies for the prevention of animal helminthiasis | <p>Teaching methods by source of knowledge: <i>Verbal:</i> story, explanation, conversation (heuristic and reproductive), lecture, instruction. <i>Visual:</i> demonstration, illustration, observation. Active methods: (use of technical teaching aids, use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets.</p> | 4 | <p>Learning methods by source of knowledge: <i>Verbal :</i> working with a book (reading, retelling, writing, taking notes, making tables, graphs, reference notes), <i>Visual :</i> observation. Learning methods by the nature of the logic of cognition (<i>analytical, synthesis methods, and the inductive method, deductive method, translational method</i>). Active methods (brainstorming, solving crosswords, debates, round tables, binary classes, business and role-playing games, group studies). Interactive learning technologies (use of multimedia technologies, dialogic learning, student cooperation (cooperation)</p> | 40 |
| DRN 2. To have veterinary technologies for the prevention of animal diseases caused by ectoparasites | <p>Teaching methods by source of knowledge: <i>Verbal:</i> story, explanation, conversation (heuristic and reproductive), lecture, instruction. <i>Visual:</i> demonstration, illustration, observation. Active methods: (use of technical teaching aids, use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets.</p> | 4 | <p>Learning methods by source of knowledge: <i>Verbal :</i> working with a book (reading, retelling, writing, taking notes, making tables, graphs, reference notes), <i>Visual :</i> observation. Learning methods by the nature of the logic of cognition (<i>analytical, synthesis methods, and inductive method, deductive method, translational method</i>). Active methods (brainstorming, solving crosswords, debates, round tables, binary classes, business and</p> | 40 |

| | | | | |
|--|--|---|---|----|
| | | | role-playing games, group studies). Interactive learning technologies (use of multimedia technologies, dialogic learning, student cooperation (cooperation)). | |
| DRN 3 To have veterinary technologies for the prevention of animal protozoan diseases | Teaching methods by source of knowledge: <i>Verbal:</i> story, explanation, conversation (heuristic and reproductive), lecture, instruction. <i>Visual:</i> demonstration, illustration, observation. Active methods: (use of technical teaching aids, use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets. | 6 | Learning methods by source of knowledge: <i>Verbal :</i> working with a book (reading, retelling, writing, taking notes, making tables, graphs, reference notes), <i>Visual :</i> observation. Learning methods by the nature of the logic of cognition (<i>analytical, synthesis methods, and the inductive method, deductive method, translational method</i>). Active methods (brainstorming, solving crosswords, debates, round tables, binary classes, business and role-playing games, group studies). Interactive learning technologies (use of multimedia technologies, dialogic learning, student cooperation (cooperation) | 26 |

5. EVALUATION BY THE EDUCATIONAL COMPONENT

5.1.Diagnostic assessment (*specified as necessary*)

Computer testing on the subject of knowledge about the causative agents of invasive diseases, methods of their indication, as well as pathogenesis, clinical and pathological signs of the main parasitic diseases and other issues on which the study of OC is based. No assessment is given.

5.2. Summative assessment

5.2.1. To assess the expected learning outcomes, it is provided

| No | Methods of summative assessment | Points / Weight in the overall assessment | Compilation date |
|----|--|---|-------------------------------|
| 1. | Assessment of the ability to prepare and select material for laboratory research, to draw up a supporting document | 5/5% | By the end of week 2 |
| 2. | Assessment of the ability to prepare and carry out deworming of animals/birds (on the basis of a vivarium) and draw up an act. | 5/5% | By the end of the 3rd week |
| 3. | Solving the problems of calculating the need for means for disinfestation and drawing up a report of the work performed | 5/5% | Until the end of the 6th week |

| | | | |
|----|---|----------|--------------------------------|
| 4. | The decision depends on the ability to navigate the range of anthelmintics , insecticidal agents and disinfectants . Debate | 10/10% | In the 7th lesson |
| 5. | Simulation exercise " Veterinary technologies for the prevention of animal helminthiasis " | 10/10% | By the end of the 8th week |
| 6. | Simulation exercise " Veterinary technologies for the prevention of animal arachnosis " | 10/10% | In the 9th lesson |
| 7. | Simulation exercise " Veterinary technologies for the prevention of animal entomosis " | 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 anti-parasitic measures to eliminate the disease (by options) | | Until the end of the 15th week |
| 10 | Multiple choice testing | 35/35% | According to the schedule |
| | Together | 100/100% | |

5.2.2. Evaluation criteria

| Component | Unsatisfactorily | Satisfactorily | Fine | Perfectly |
|--|--|--|--|--|
| Assessment of the ability to prepare and select material for laboratory research, to draw up a supporting document | 0-2 | 3 | 4 | 5 |
| | <i>The procedure is not oriented</i> | <i>The sequence of the procedure was not followed precisely, the document was compiled with gross errors</i> | <i>The procedure was correctly performed at the facility, the document was drawn up with inaccuracies</i> | <i>The procedure is explained in detail and correctly performed at the facility, the documents are drawn up without errors</i> |
| Assessment of the ability to prepare and carry out deworming of animals/birds (on the basis of a 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 observed with gross errors</i> | <i>The procedure was correctly performed at the facility</i> | <i>The procedure is explained in detail and correctly performed on a live object</i> |
| Solving the problems of calculating the need for means for disinfection and drawing up a report of the work performed | 0-2 | 3 | 4 | 5 |
| | <i>The problem is solved incorrectly</i> | <i>The task 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 have been fulfilled, while creativity and thoughtfulness have been demonstrated</i> |
| to navigate the assortment 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 were fulfilled with insignificant inaccuracies</i> | <i>The requirements of the task have been fulfilled, while creativity and thoughtfulness have been demonstrated</i> |
| Simulation exercise by subject with the distribution of points based on mutual evaluation | 0-4 | 5-7 | 8-9 | 10 |
| | <i>Role not fulfilled</i> | <i>The role is generally completed, with hints and corrections</i> | <i>The role is fulfilled, the knowledge of the instructions for combating the disease is demonstrated, and uncertainty is demonstrated</i> | <i>The role was performed with creativity, demonstrated knowledge of the instructions for combating the disease, the ability to communicate, argue and show determination in defending one's position,</i> |
| Plan of anti-parasitic 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 have been fulfilled with insignificant inaccuracies</i> | <i>The requirements of the task have been fulfilled, while creativity and thoughtfulness have been demonstrated</i> |

5.3. Formative assessment:

To assess the current progress in learning and understand the directions for further improvement is provided

| No | Elements of formative assessment | Date |
|-----------|--|---|
| 1 | Feedback aimed at supporting the student in understanding the correctness of the documentation | Every time when checking the completed documents and supporting documents |
| 2 | Self-check on knowledge of the sequence of actions when performing procedures (diagnostic, preventive, veterinary -sanitary) based on the results of the analysis of completed blitz tasks | Blitz-control at the beginning of classes |

| | | |
|---|---|--|
| 3 | Evaluating the activity and effectiveness of the participants' participation in focus groups and role-playing in simulation exercises. Comments and tips. | Each time at classes in the form of focus groups or simulation exercises |
| 4 | Feedback with comments and recommendations during problem solving | 13th week |
| 5 | Oral review and correction of plans for antiparasitic measures to eliminate the disease (according to options) | According to the schedule by topics |

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

6. EDUCATIONAL RESOURCES (LITERATURE)

6.1. Main sources

Methodical support

1. O.I. Kasyanenko, V.I. Rysovany, Yu.V. Negreba . L.M. Lazorenko , Study guide for performing laboratory-practical classes and independent work of students on parasitology and invasive animal diseases. Sumy NAU. Sumy, 2020. - 140 p.
2. Rysovaniy V.I., Negreba Yu.V., Lazorenko L.M., Parasitology and invasive diseases of animals. Workbook for conducting laboratory-practical and independent classes Part 1 Veterinary helminthology. For students of specialties 211 "Veterinary Medicine" and 212 "Veterinary Hygiene, Sanitation and Expertise" full-time study. 87 p.
3. O.I. Kasyanenko , V.I. Rysovany, Yu.V. Negreba . V. Bioecological zooparasitology . Methodological guidelines for conducting laboratory-practical and independent classes for full-time students of the Faculty of Veterinary Medicine, Master's degree. Sumy. 2022. – 24 p.

Recommended Books

Basic

4. Secretary K.V. Basics of ecological zooparasitology . Lviv, 2007. – 358 p.
5. Nevyadomska K.. General parasitology. K.: "Scientific opinion". - Kyiv, 2006. - 483 p.
6. Galat V.F., Berezovskyi A.V., Prus M.P., Soroka N.M. Parasitology and invasive diseases of animals: Textbook; edited by V.F. Galata K.: Higher Education , 2003.– 464 p.
7. Galat V.F., Berezovskyi A.V., Prus M.P., Soroka N.M. Parasitology and invasive diseases of animals. Practicum: Study . manual. K.: Higher Education , 2004. – 238 p.
8. Dakhno I.S., Galat V.F., Berezovskyi A.V., Prus M.P., Soroka N.M. Atlas of animal helminths. K.: Vetinform , - 2001. - 118 p.
10. Dakhno I.S., Dakhno Y.I. Ecological helminthology: Education . manual. Sumy: Kozatskyi Val, 2010. – 220 p.
11. Prykhodko Y.O., Ponomar S.L., Mazanniy O.V., Nikiforova O.V., Antipov A.A., Goncharenko V.P. Parasitology and invasive diseases of animals Workshop (for independent work). Bila Tserkva.: " Bilotserkivdruk " LLC. 2011. 312p.

6.2. Additional sources

12. Verbytskyi P.I., Dostoevsky. P.I. Handbook of a doctor of veterinary medicine. Kyiv.: Urozhai, 2004. 1280 p.

13. Galat V.F., Berezovskyi A.V., Soroka N.M. Prus M.P. Invasive diseases of pigs: Educational . Kyiv .: NAU, 2006. 94 p.
14. Galat V.F., Berezovskyi A.V., Soroka N.M. Prus M.P. Invasive Diseases of horses: Educational guide . Kyiv .: NAU, 2008. 154 p.
15. Boch J., Supperer R. Veterinarmedizinische Parasitological . Berlin and Hamburg . : Verlag Paul Parey , 2002. 906 p

6.3. Software

- Computers with software for practical work
- Microsoft Power Point - data visualization Microsoft Power BI - analytics and data visualization
- Multimedia projector, marker board and screen;
- Moodle distance learning and control system
- Use of the Internet platform Zoom.

Addition. New syllabus , Based on the syllabus Vet . Tech . Prof. paralysis _ Min. TV _ Mag. 1.4. In the old methodological support , sources of literature have been updated, software support has been added . Changes have been made to the number of hours.