

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY
Faculty of Veterinary Medicine
Department of Virology, Pathology and Poultry Diseases. prof. II Panikar

MODULE SYLLABUS


Autopsy and pathological diagnosis of animal diseases


Implemented in the “Veterinary Medicine” Academic Program

Area of specialization 211 “ Veterinary Medicine”

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


Sumy-2021


Author:  (signature) Panasenko O. Ph D., Associate Professor (surname, initials) (academic degree and title, position)

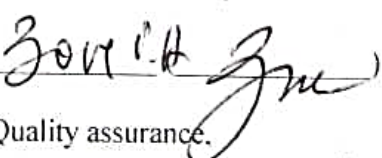
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| Considered, approved and approved at the meeting of the department virology, pathoanatomy and diseases of poultry prof. Panikara II | protocol from <u>8.06.2021</u> № <u>12</u> |
| | The head departments  (signature) <u>P. Petrov</u> (surname, initials) |

Approved by:

Guarantor of the Academic program  (L. Ulko)

Dean of the Faculty  (O. Nechyporenko)

Syllabus review (attached) is provided by :  Kasianenko



Representative of the Department of Education Quality assurance, licensing and accreditation H. Saparuk (H. Saparuk)

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Syllabus review data:

| The academic year in which changes are made | The Academic program attachment number with changes description | Changes revised and approved | | |
|---|---|---|--------------------|--------------------------------------|
| | | Minutes No and date of the department meeting | Head of Department | Guarantor of the educational program |
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1. MODULE OVERVIEW

| | | | | | |
|------|---|--|---------------------|-----------------|---------------|
| 1. | Title | OK 30. Autopsy and pathological and anatomical diagnosis of animal diseases | | | |
| 2. | Faculty/Department | Veterinary medicine / virology, pathoanatomy and poultry diseases. prof. Panikara II | | | |
| 3. | Type (obligatory or optional) | Obligatory | | | |
| 4. | Program(s) to which module is attached | Veterinary medicine / 211 Veterinary medicine | | | |
| 5. | Level of the National Qualifications Framework | - | | | |
| 6. | Semester and duration of module | NRC of Ukraine - level 7, QF-EHEA - second cycle, EQF-LLL - level 7 | | | |
| 7. | ECTS credits number | 8-9 semester, 18 + 18 weeks | | | |
| 8. | Total workload and time allotment | 4.0 | | | |
| 9. | The total number of hours and their distribution Language of instruction | Contact work (classes) | | Individual work | |
| | | Lectures | Practical / seminar | Laboratory | |
| | | - | | 30 | 30 |
| | | - | | 30 (6/6) | 30 (54/54) |
| 10. | Module leader | English | | | |
| 11. | Module leader contact information | Panasenko Alexander Sergeevich | | | |
| 11.1 | | mob. tel. +380667103234, e-mail- alpanas@ukr.net | | | |
| 12. | Module description | «Dissection and pathological diagnosis of animal diseases "- as a discipline lays the foundations of knowledge about the organization of pathological service and its purpose, provides knowledge of morphological and clinical manifestations of diseases at all stages of their development, summarizes skills of clinical and anatomical analysis, synthetic analysis of diagnostic signs and their correct interpretation in causal relations, which is necessary for further professional activity. | | | |
| 13. | Module aim | The purpose of the educational component is to form in students a system of special knowledge about the sequence of pathological examination of corpses of different species of animals in order to clarify the lifelong diagnosis, establish morphological changes in organs and causes of death .. | | | |
| 14. | Module Dependencies (prerequisites, co-requisites, incompatible modules) | The educational component, as a basis for clinical subjects, is based on the foundations of general theoretical disciplines: pathomorphology, pathophysiology, forensic medicine, therapy, surgical diseases, infectious diseases, pediatrics, obstetrics and gynecology, urology, oncology, and integrates with these disciplines; this involves the formation of skills to apply the acquired knowledge and practical skills from the sectional biopsy course in the process of further study and in future professional activities. | | | |
| 15. | The policy of academic | Applicants are explained the value of acquiring new | | | |

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| | integrity | <p>knowledge; value and functions of academic integrity; report the inadmissibility of plagiarism, encourage independent performance of educational tasks, correct reference to sources of information in the case of borrowing scientific materials. Write-offs during tests and exams are prohibited (including the use of mobile devices). Papers should have correct textual references to the literature used.</p> <p>For violation of academic integrity, students may be held subject to the following academic liability: Academic plagiarism - grade 0, re-completion of the task. Academic fraud (writing off, deception, publishing someone's work for their own) - cancellation of points; re-assessment, re-execution of non-independently performed work with new source data; Use of electronic devices during the final control of knowledge - suspension from work, grade 0, re-passing the final control</p> |
|--|-----------|---|

2. CORRELATION BETWEEN MODULE LEARNING OUTCOMES (MLOs) AND PROGRAM LEARNING OUTCOMES (PLOs)

| <p>MLOs: On successful completion of the module the learner will be able to:</p> | PLOs 1 | PLOs 2 | PLOs 13 | How assessed |
|--|--------|--------|---------|--|
| <p>MLOs 1. To know: safety precautions at autopsy and the basics of diagnostic and forensic veterinary autopsy; the value of pathological autopsy of animal carcasses; list of diseases for which it is forbidden to perform an autopsy; the importance of postmortem pathological diagnosis in the fight against animal diseases; structure and logic of construction of pathological diagnosis, its components, variants of the main disease. Establish a pathological diagnosis, make a differential diagnosis of diseases.</p> <p>Know the topographic location of the internal organs of different animals. Identify the underlying disease, complications of the underlying disease, comorbidities</p> | + | + | | <ul style="list-style-type: none"> - Oral control (participation in a discussion on the topic of the lecture) - Written control (performance of tasks on independent work, independent study of the topic as a whole or individual issues of independent work (test results, preparation of presentations, presentation report of self-developed material)) - Laboratory-practical control (performance of tasks on laboratory works) |
| <p>MLOs 2. Detect pathological changes in the organs of animals in diseases of various etiologies. Recognize postmortem changes during autopsy. Distinguish the purpose of pathological tools during section work. Organize the necessary level of individual safety when working with corpse material. Have methods of disposal and disposal of cadaveric material.</p> | + | + | + | <ul style="list-style-type: none"> - Oral control (participation in a discussion on the topic of the lecture) - Written control (performance of tasks on independent work, independent study of the topic as a whole or individual issues of independent work (test results, preparation of |

| | | | | |
|--|---|---|---|---|
| | | | | presentations, presentation report of self-developed material)) - Laboratory-practical control (performance of tasks on laboratory works) |
| MLOs 3. Know the rules of selection of pathological material. Analyze sectional findings. Prepare autopsy documentation Use knowledge to build a pathological and anatomical diagnosis. Capture, restore color, preserve and install the macrodrug. | + | + | + | - Oral control (participation in a discussion on the topic of the lecture) - Written control (performance of tasks on independent work, independent study of the topic as a whole or individual issues of independent work (test results, preparation of presentations, presentation report of self-developed material)) - Laboratory-practical control (performance of tasks on laboratory works) |
| MLOs 4. Know the essence of death, its types and posthumous changes. Be able to distinguish postmortem changes from lifelong pathological processes. Understand the object and purpose of the autopsy. Use skills to organize and perform an autopsy. Master the technique and features of autopsy of different species of animals. Maintain appropriate pathological documentation. | + | + | + | - Oral control (participation in a discussion on the topic of the lecture) - Written control (performance of tasks on independent work, independent study of the topic as a whole or individual issues of independent work (test results, preparation of presentations, presentation report of self-developed material)) - Laboratory-practical control (performance of tasks on laboratory works) - Final control (solving tests) |

3. MODULE INDICATIVE CONTENT

| Topic. List of issues to be addressed within the topic | Distribution within the total time budget | | | Individual work | Recommended Books ¹ |
|---|---|-------------------|-----------|-----------------|--------------------------------|
| | Classroom work | | | | |
| | Luk e | P.z / semin. with | Lab. with | | |
| Topic 1. Diagnosis and forensic autopsy of animal carcasses. Safety precautions when | | | 8 | 8 | [1, 7, 14, 17] |

¹ Specific source from the main or additional recommended literature

| | | | | | |
|--|---|--|----|----|-----------------|
| dissecting corpses | | | | | |
| Topic 2. Pathological changes in the organs of animals in diseases of various etiologies | | | 6 | 6 | [1, 10, 12, 16] |
| Topic 3. Rules of selection of pathological material | | | 8 | 8 | [2, 5, 9, 13] |
| Topic 4. Organization of autopsy, veterinary and sanitary requirements for the autopsy site | | | 8 | 8 | [1, 4, 8, 16] |
| Topic 5. Technique and features of pathological autopsy of corpses of different species of animals. | | | 8 | 8 | [1, 3, 8, 17] |
| Topic 6. Compilation of pathoanatomical documentation. | | | 6 | 6 | [3, 7, 10, 16] |
| Topic 7. The concept of pathological diagnosis. Special pathomorphology | | | 8 | 8 | [4, 9, 10, 17] |
| Topic 8. Differential pathological diagnosis of animal diseases. | | | 8 | 8 | [4, 5, 11, 16] |
| Total | - | | 60 | 60 | |

4. TEACHING AND LEARNING METHODS

| MLOs | Teaching methods (work to be carried out by the teacher during classes, consultations) | Number of hours | Teaching methods (what types of educational activities the student must perform independently) | Number of hours |
|--------|--|-----------------|--|-----------------|
| MLOs 1 | <p>Survey of students with explanation of key questions of the subject, answers to students' questions, mastery of practical skills, methods of laboratory work.</p> <p>Interactive discussion of the topic in the form of a discussion, including information presented in diagrams and figures, with a mandatory visit to the autopsy</p> <p>Solving clinical and situational problems (the concept of pathological diagnosis, its components, variants of the underlying disease).</p> <p>Carrying out of autopsy with the subsequent detailed analysis of a concrete case, discussion of the basic clinical data, filling of the corresponding part of the protocol of pathological research</p> | 14 | <p>Independent processing of materials on the topic. Memorization of theoretical material, observation.</p> <p>On the basis of the studied and processed material Fr.drawing up a synopsis of independent work</p> <p>Elaboration of the relevant sections of the autopsy protocol (according to the real case); drawing up a pathological-anatomical diagnosis, registration of a clinical-pathological-anatomical epicrisis about the case</p> <p>Acquaintance with the information of official sites on a subject of employment or a separate question.</p> | 14 |

| | | | | |
|--------|--|----|--|----|
| MLOs 2 | <p>Survey of students with explanation of key questions of the subject, answers to students' questions, mastery of practical skills, methods of laboratory work.</p> <p>Interactive discussion of the topic in the form of a discussion, including information presented in diagrams and figures, with a mandatory visit to the autopsy</p> <p>Solving clinical and situational problems (the concept of pathological diagnosis, its components, variants of the underlying disease).</p> <p>Carrying out of autopsy with the subsequent detailed analysis of a concrete case, discussion of the basic clinical data, filling of the corresponding part of the protocol of pathological research</p> | 16 | <p>Independent processing of materials on the topic. Memorization of theoretical material, observation.</p> <p>On the basis of the studied and processed material Fr.drawing up a synopsis of independent work</p> <p>Elaboration of the relevant sections of the autopsy protocol (according to the real case); drawing up a pathological-anatomical diagnosis, registration of a clinical-pathological-anatomical epicrisis about the case</p> <p>Acquaintance with the information of official sites on a subject of employment or a separate question.</p> | 16 |
| MLOs 3 | <p>Survey of students with explanation of key questions of the subject, answers to students' questions, mastery of practical skills, methods of laboratory work.</p> <p>Interactive discussion of the topic in the form of a discussion, including information presented in diagrams and figures, with a mandatory visit to the autopsy</p> <p>Solving clinical and situational problems (the concept of pathological diagnosis, its components, variants of the underlying disease).</p> <p>Carrying out of autopsy with the subsequent detailed analysis of a concrete case, discussion of the basic clinical data, filling of the corresponding part of the protocol of pathological research</p> | 16 | <p>Independent processing of materials on the topic. Memorization of theoretical material, observation.</p> <p>On the basis of the studied and processed material Fr.drawing up a synopsis of independent work</p> <p>Elaboration of the relevant sections of the autopsy protocol (according to the real case); drawing up a pathological-anatomical diagnosis, registration of a clinical-pathological-anatomical epicrisis about the case</p> <p>Acquaintance with the information of official sites on a subject of employment or a separate question.</p> | 16 |
| MLOs 4 | <p>Survey of students with explanation of key questions</p> | 14 | <p>Independent processing of materials on the topic.</p> | 14 |

| | | | | |
|--|---|--|--|--|
| | <p>of the subject, answers to students' questions, mastery of practical skills, methods of laboratory work.</p> <p>Interactive discussion of the topic in the form of a discussion, including information presented in diagrams and figures, with a mandatory visit to the autopsy</p> <p>Solving clinical and situational problems (the concept of pathological diagnosis, its components, variants of the underlying disease).</p> <p>Carrying out of autopsy with the subsequent detailed analysis of a concrete case, discussion of the basic clinical data, filling of the corresponding part of the protocol of pathological research</p> | | <p>Memorization of theoretical material, observation.</p> <p>On the basis of the studied and processed material Fr.drawing up a synopsis of independent work</p> <p>Elaboration of the relevant sections of the autopsy protocol (according to the real case); drawing up a pathological-anatomical diagnosis, registration of a clinical-pathological-anatomical epicrisis about the case</p> <p>Acquaintance with the information of official sites on a subject of employment or a separate question.</p> | |
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5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

| № | Methods of summative evaluation | Points / Weight in the overall score | Date of compilation |
|----|--|--------------------------------------|--|
| 1. | Oral control (participation in a discussion on the topic of the lecture) | 40 points / 40% | Weekly |
| 2. | Written control (performance of tasks on independent work) | 15 points / 15% | According to the schedule |
| 3. | Laboratory-practical control (performance of tasks on laboratory works) | 30 points / 30% | According to the schedule of the hospital |
| 4. | Final control (solving tests) | 15 points / 15% | According to the schedule of delivery of modules |

5.2.2. Grading criteria

| Component ² | Unsatisfactorily | Satisfactorily | Okay | Perfectly ³ |
|----------------------------------|---|--|--|--|
| | <14 points | 15-24 points | 25-34 points | 35-40 points |
| Thematic survey. Oral control | The student can play only individual fragments of the course. | The student has certain knowledge provided in the program of the | The student in general is well versed in the material, knows | The student demonstrates complete and solid knowledge of the |

² Indicate the component of summative assessment

³ Indicate the distribution of points and the criteria that determine the level of evaluation

| | | | | |
|--|---|---|---|--|
| | | discipline, has the basic provisions studied at a level that is defined as the minimum allowable | the basic provisions of the material, makes an analysis of possible situations based on them and is able to apply in solving typical practical problems, but admits some inaccuracies | educational material in the amount that corresponds to the program of the discipline, correctly and reasonably makes the necessary decisions in various non-standard situations. |
| | <i><9 points</i> | <i>10-19</i> | <i>20-29 points</i> | <i>30 points</i> |
| Laboratory-practical control (performance of tasks on laboratory works) Solution of clinical and situational tasks | The student is not prepared to solve problems, the answer is incomplete, some components are missing or insufficient to disclose | Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue Using the basic theoretical provisions, the student has difficulty performing the task. Tasks are significantly formalized: there is a correspondence of the algorithm, but there is no deep understanding of the work | The student has mastered the basic material, and understands the solution of problems, has suggestions on the direction of their solutions. All the requirements of the task are met, but in violation of the methods | The task is performed methodically correctly and qualitatively. The student is able to implement the theoretical provisions of the discipline in practice When performing tasks, he showed the ability to solve tasks independently |
| | <i><5 points</i> | <i>5-8</i> | <i>8-14 points</i> | <i>15 points</i> |
| Written control (performance of tasks on independent work). Protection of the abstract from independent work | The student does not have a complete understanding of the material on the discipline. The student is not prepared to independently solve problems that outline the purpose and objectives of the discipline | Despite the fact that the student completed the program of the discipline, he worked passively, his answers during the registration of works are mostly incorrect, unfounded | Knows the characteristics of the main provisions that are crucial in performing the design of tasks and explaining the decisions made, within the discipline being studied. Errors in the answers are not systemic. | When performing tasks, he showed the ability to solve tasks independently. The synopsis is decorated perfectly, logically arranged material with an understanding of the relationships of the processes disclosed on this topic. |
| Multiple choice tests | The student gives the correct answer to several questions | The student has certain knowledge provided in the | The student is generally well versed in the | The student demonstrates complete and solid |

| | | | | |
|--|---------------------------------|--|--|---|
| | (≤ 33% of the correct answers). | program of the discipline, has the basic provisions studied and gives the correct answer to several questions (34-59% of the correct answers). | material, knows the basic provisions of the material, and gives the correct answer to several questions (60-89% of the correct answers). | knowledge of the study material in the amount that corresponds to the program of the discipline, correctly answers the test questions (90-100% of correct answers). |
|--|---------------------------------|--|--|---|

5.3. Formative assessment

Formative exercises are designed to enable students to develop particular aspects of their learning, prior to summative assessments. Formative exercises are designed to help students use feedback and self-reflection to manage and develop their learning so that they can see how to improve their work.

| № | Elements of formative assessment | Date |
|---|--|--------------------------------|
| 1 | Oral interview students with an explanation of key questions of the subject, answers to students' questions, mastering practical skills (methods of laboratory work) | During the lesson |
| 2 | Oral feedback from the teacher while working on the solution of clinical and situational problems | During the lesson |
| 3 | Written feedback from the teacher after checking the synopsis with independent study of the discipline. | Within a week, after execution |

6. LEARNING RESOURCES

6.1. 1. Key resources

1. Urbanovich PP, Potocki MK, Gevkan II, Zon GA and others. Pathological anatomy of animals: a textbook; edited by PP Urbanovich and MK Potocki. K.: Vetinform, 2008. 879 p.
2. Zon GA, Ivanovskaya LB Differential pathological diagnosis of infectious diseases of animals. Sumy, 2011. 215 p.
3. Zon G.A. Pathological anatomy of parasitic diseases of animals. Sumy: "Source", 2005. 252 p.
4. Zabelo EM Pathological anatomy of infectious diseases. K: Agrarian Science, 1997. 246 p.
5. Zon GA, Skripka MV, Ivanovskaya LB Pathological anatomy of animal carcasses: a textbook. second edition, supplemented. Sumy; GDP "Dream-1" Ltd. 2012. 244p.
6. Zon G.A. Forensic veterinary examination: a textbook. Sumy: GDP "Dream-1", 2002. 258 p.

6.1.2. Methodical support

7. NMC in the discipline "Dissection and pathological diagnosis of animal diseases. / Zon GA - Sumy, 2012 (SNAU website)
8. Methodical instructions on independent work of students on autopsy. Sumy, SNAU, 2013.
9. Zon GA, Ivanovskaya LB Methodical instructions for training in pathoanatomy. Sumy, 2010.

6.1.3. Other sources

10. <https://library.snau.edu.ua>
11. <https://www.acvs.org/veterinary-surgery-journal>

6.2. Additional sources

12. Borisevich BV, Skripka MV, Lisova VV Handbook of pathological and anatomical terms. Poltava, 2005. 124 p.
13. Kokurichev PI, Domnin BT, Kokuricheva MP Pathanatomy of farm animals: Album, St. Petersburg: Agropromizdat, 1994. 212 p.
14. Krivutenko AI, Zhakov MS, Urbanovich PP Handbook of pathological diagnosis of diseases of farm animals; under ed. AIKrivutenko. K. : Urozhay, 1983. 168 s.
15. Akulov AV, VM Aratenko, Bessarabov BF, Velikovskaya Yu.A. etc. Pathological diagnosis of bird diseases; ed. VP Шишкова. М. : Kolos, 1978. 440 s.
16. Aurorov AA, Akulov AV, Burba LB, Zhakov MS, etc. Pathological diagnosis of diseases of pigs; under ed. В.П.Шишкова. М. : Kolos, 1984. 335 s.
17. Akulov AV, Aratenko VM, Arkhipov NI, Buzmakov RA etc. Pathological diagnosis of cattle diseases; under ed. В.П.Шишкова. М. : Agropromizdat, 1987. 399 s.

6.3. Software

- Microsoft Power Point - data visualization Microsoft Power BI - analytics and data visualization
- Multimedia projector, whiteboard and screen;
- Moodle distance learning and control system

Рецензія на Робочу програму (силабус)

| Параметр, за яким оцінюється робоча програма (силабус) освітнього компонента гарантом або членом проєктної групи | Так | Ні | Коментар |
|--|-----|----|----------|
| Результати навчання за освітнім компонентом (ДРН) відповідають НРК | + | | |
| Результати навчання за освітнім компонентом (ДРН) відповідають передбаченим ПРН (для обов'язкових ОК) | + | | |
| Результати навчання за освітнім компонентом дають можливість виміряти та оцінити рівень їх досягнення | + | | |

Член проєктної групи ОП _____

| Параметр, за яким оцінюється робоча програма (силабус) освітнього компонента викладачем відповідної кафедри | Так | Ні | Коментар |
|--|-----|----|----------|
| Загальна інформація про освітній компонент є достатньою | + | | |
| Результати навчання за освітнім компонентом (ДРН) відповідають НРК | + | | |
| Результати навчання за освітнім компонентом (ДРН) дають можливість виміряти та оцінити рівень їх досягнення | + | | |
| Результати навчання (ДРН) стосуються компетентностей студентів, а не змісту дисципліни (містять знання, уміння, навички, а не теми навчальної програми дисципліни) | + | | |
| Зміст ОК сформовано відповідно до структурно-логічної схеми | + | | |
| Навчальна активність (методи викладання та навчання) дає змогу студентам досягти очікуваних результатів навчання (ДРН) | + | | |
| Освітній компонент передбачає навчання через дослідження, що є доцільним та достатнім для відповідного рівня вищої освіти | + | | |
| Стратегія оцінювання в межах освітнього компонента відповідає політиці Університету/факультету | + | | |
| Передбачені методи оцінювання дозволяють оцінити ступінь досягнення результатів навчання за освітнім компонентом | + | | |
| Навантаження студентів є адекватним обсягу освітнього компонента | + | | |
| Рекомендовані навчальні ресурси є достатніми для досягнення результатів навчання (ДРН) | + | | |
| Література є актуальною | + | | |

Рецензент (викладач кафедри) _____
 (назва) (посада, ПІБ) (підпис)