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|  | **SYLLABUS OF AN ACADEMIC DISCIPLINE**  **«GENERAL AND SPECIAL SURGERY»** |
| **Degree of higher education – Master degree** |
| **Specialty 211 Veterinary medicine** |
| **Academic programme «Veterinary medicine»** |
| **Year of study \_4,5\_\_, semester 7, 8, 9****Form of study \_\_\_** **full-time \_\_\_** |
| **Number of ECTS credits\_\_\_7\_\_\_** |
| **Language(s) of instruction English** |
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| **Lecturer of the discipline** | **Klymchuk V. PhD, Kulida M., PhD** |
| **Lecturer’s contact information (e-mail)** | **vadvetdoctor@gmail.com \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **URL of the e-learning course on the NULES e-learning portal**  | **https://elearn.nubip.edu.ua/course/view.php?id=584** |

**ACADEMIC DISCIPLINE DESCRIPTION**

 *(up to 1000 printed characters)*

Purpose mastering the basics of surgical pathology with a specific idea of the causes, etiology, pathogenesis, diagnosis and apply a comprehensive approach to the treatment of surgically ill animals.

Objectives to combine in practice knowledge and skills in general biological disciplines directly with clinical, to learn the basics of surgical pathology, to form a clear idea of the causes, pathogenesis, principles of treatment and prevention of surgical diseases of animals.

As a result of studying the discipline the student must:

Know: the clinical manifestation of surgical diseases that are registered in animals, to identify the causes of their occurrence, to be able to make an accurate diagnosis, to have sufficient operative and conservative methods of treatment.

Be able: to correctly diagnose, provide the necessary individual surgical care to a sick animal, to carry out preventive measures aimed at preventing the emergence of mass surgical diseases, to give them a scientific and economic justification.

**Acquisition of competencies:**

**Integral competency (IC):** the ability to solve specialized tasks and problems in professional activities in the field of veterinary medicine in the field of "Anesthesiology"

**General competencies (GC):**

GC 2. Ability to apply knowledge in practical situations.

GC 3. Knowledge and understanding of the subject field and profession.

GC 7. Ability to conduct research at an appropriate level.

GC 9. Ability to make informed decisions.

**Special (professional) competencies (SC):**

PC2. The ability to use tools, special devices, devices, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities.

PC7. Ability to organize and conduct laboratory and special diagnostic studies and analyze their results.

PC12. Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans.

**Expected learning outcomes (ЕLO):**

1. Know and correctly use the terminology of veterinary medicine.

2. Use information from domestic and foreign sources to develop diagnostic, treatment and business strategies.

3. To determine the essence of physico-chemical and biological processes that occur in the body of animals in normal and pathological conditions.

4. To establish a connection between the clinical manifestations of the disease and the results of laboratory studies.

6. Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies.

7. To monitor the causes of the spread of diseases of various etiologies and biological pollution of the environment with livestock waste, as well as materials and means of veterinary use.

9. Develop measures aimed at protecting the population from diseases common to animals and humans.

10. Propose and use expedient innovative methods and approaches to solving problematic situations of professional origin.

11. Summarize and analyze information on the effectiveness of the work of veterinary specialists of various subordinates.

12. Know the rules and legislative regulations regarding supervision and control of production, storage, transportation and sale of products of animal and plant origin.

13. Know the rules of storage of various pharmaceuticals and biological preparations, ways of their enteral or parenteral use, understand the mechanism of their action, interaction and complex action on the animal body.

14. Know the principles and methods of marketing and management of veterinary products and services in veterinary medicine.

15. Know the rules and requirements of biosafety, bioethics and animal welfare.

16. Carry out accounting reports during professional activity.

17. To carry out educational activities among industry workers and the population.

18. To have specialized software tools for performing professional tasks.

**ACADEMIC DISCIPLINE STRUCTURE**

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| **Topic** | **Hours**(lecture/laboratory, practical, seminar) | **Learning outcomes** | **Tasks** | **Assessment** |
| **7 Semester** |
| **Module 1** |
| Topic 1. A brief history of veterinary medicine. The subject of general medicine and its connection with other disciplines. | 2/2 | Understand the importance of discipline in the formation of a master of veterinary medicine. Know the purpose and tasks of the discipline. | Submission of laboratory work #1. Performing independent work #1 (including in elearn) | **4** |
| Topic 2. General information about surgical diseases of animals, methods of treatment and prevention. | 2/2 | Know general information about surgical diseases of animals, methods of their treatment and prevention. Get acquainted with the work of the surgical clinic. Distinguish between outpatient and inpatient treatment of animals. Be able to correctly draw up and maintain accompanying documentation. | Submission of laboratory work #2. Carrying out independent work #2 (including in elearn) | **4** |
| Topic 3. Traumatism of animals (classification, prevention). The impact of trauma on the body. | 2/2 | Know general information about animal injuries (classification and prevention). Understand the impact of trauma on the body. | Submission of laboratory work #3. Carrying out independent work No. 3 (including in elearn) | **4** |
| Topic 4. Bleeding. Acute anemia. Classification of bleeding and ways to stop it. | 2/2 | Be able to provide assistance in case of acute anemia, know the classification of bleeding and ways to stop it. Apply blood transfusion if necessary, avoiding various complications. | Submission of laboratory work #4. Carrying out independent work #4 (including in elearn) | **4** |
| Topic 5. Closed injuries of animals. | 2/2 | Be able to carry out differential diagnosis and treatment of such closed injuries as bruise, concussion, sprain, rupture, lymphoextravasation and hematoma. | Submission of laboratory work No. 5. Carrying out independent work No. 5 (including in elearn) | **4** |
| Topic 6. Wounds (open mechanical damage). Symptoms, classification, types of healing. | 2/2 | Know the clinical signs of wounds, their classification. Be able to perform surgical treatment of wound surfaces, provide first aid for injuries and understand the types of healing. | Submission of laboratory work No. 6. Completion of independent work No. 6 (including in elearn) | **4** |
| Topic 7. Surgical infection: types and clinical manifestations. | 2/2 | Conduct differential diagnosis of surgical infection, know its types and clinical manifestations. To have different methods of treatment of animals with this pathology. | Submission of laboratory work #7. Carrying out independent work #7 (including in elearn) | **4** |
| Topic 8. Diseases of blood and lymphatic vessels. Damage to peripheral nerves. | 2/2 | Know and differentiate diseases of blood and lymphatic vessels, as well as damage to peripheral nerves. Be able to carry out the necessary treatment. | Submission of laboratory work #8. Carrying out independent work #8 (including in elearn) | **4** |
| **Total** |  |  |  | **32** |
| **Module 2** |
| Topic 9. Death, ulcers, fistulas. Foreign bodies. | 2/2 | To be able to carry out differential diagnosis of necrotizing diseases, ulcers, fistulas and foreign bodies. Provide medical assistance. | Submission of laboratory work #9. Carrying out independent work #9 (including in elearn) | **4** |
| Topic 10. Displacement of internal organs. | 2/2 | To be able to carry out differential diagnosis for displacement of internal organs in animals. Know the clinical signs of these pathological conditions and provide animals with the necessary medical care. | Submission of laboratory work #10. Carrying out independent work #10 (including in elearn) | **4** |
| Topic 11. Skin diseases (symptoms, diagnosis and treatment). | 2/2 | To be able to carry out differential diagnosis and treatment of dermatitis, pustular diseases and eczema, to know their clinical signs and causes. | Submission of laboratory work #11. Carrying out independent work #11 (including in elearn) | **4** |
| Topic 12. Muscle diseases (myositis, myopathy and atrophy). | 2/2 | To know the clinical and laboratory signs of myositis, myopathy and atrophy. To be able to carry out their differential diagnosis and treatment. | Submission of laboratory work #12. Carrying out independent work #12 (including in elearn) | **4** |
| Topic 13. Diseases of tendons, tendon sheaths and bursae. | 2/2 | Know the clinical and laboratory signs of diseases of tendons, tendon sheaths and bursae. To be able to carry out their differential diagnosis and treatment. | Submission of laboratory work #13. Carrying out independent work No. 13 (including in elearn) | **4** |
| Topic 14. Diseases of bones and joints. | 2/2 | To be able to carry out differential diagnosis of bone and joint diseases. Know clinical and laboratory signs. Be able to use different treatment regimens. | Submission of laboratory work #14. Carrying out independent work #14 (including in elearn) | **4** |
| Topic 15. Neoplasms. Classification. Methods of diagnosis and treatment. | 2/2 | To know the clinical and laboratory signs of neoplasms, their classification. Methods of diagnosis and treatment. | Submission of laboratory work #15. Carrying out independent work #15 (including in elearn) | **4** |
| **Total** |  |  |  | **28** |
| **Total for Semester** | **70** |
| **Test** |  |  |  | **30**  |
| **8 Semester** |
| **Module 3** |
| Topic 16. Anatomy and physiology of the organ of vision in animals. | 2/4 | Know the anatomy and physiology of the organ of vision in animals. | Submission of laboratory work #16. Performing independent work #16. (including in elearn) | **6** |
| Topic 17. Research of the organ of vision. | 2/4 |  To be able to conduct studies of the organ of vision in various species of animals using various schemes, devices and tools. | Submission of laboratory work #17. Carrying out independent work #17 (including in elearn) | **8** |
| Topic 18. Diseases of eyelids, conjunctiva and cornea. | 2/4 | Know the clinical and laboratory signs of diseases of the eyelids, conjunctiva and cornea. To be able to use schemes of differential diagnosis and treatment of animals according to these pathologies. | Submission of laboratory work #18. Carrying out independent work #18 (including in elearn) | **9** |
| Topic 19. Inflammation of the vascular tract and diseases of the retina. | 2/4 | Know the clinical and laboratory signs of inflammation of the vascular tract and diseases of the retina. To be able to use schemes of differential diagnosis and treatment of animals according to these pathologies. | Submission of laboratory work #19. Carrying out independent work #19 (including in elearn) | **9** |
| **Total** |  |  |  | **32** |
| **Module 4** |  |  |  | **28** |
| Topic 20. Anatomical and physiological characteristics of fingers in animals. Features of the structure | 2/4 | To know the anatomical and physiological characteristics of fingers in animals and the peculiarities of their structure in different species of animals. | Submission of laboratory work #20. Carrying out independent work #20 (including in elearn) | **6** |
| Topic 21. Hoof care and deformities. | 2/4 | Be able to care for hooves. Know different types of deformations, their causes and methods of prevention and treatment. | Submission of laboratory work #21. Carrying out independent work #21 (including in elearn) | **6** |
| Topic 22. Diseases of the udders in cows. | 2/4 | To know the clinical and laboratory signs of diseases of the hind legs in cows. To be able to use schemes of differential diagnosis and treatment of animals according to these pathologies. | Submission of laboratory work #22. Carrying out independent work #22 (including in elearn) | **8** |
| Topic 23. Peculiarities of deformities and diseases of hooves in horses. | 1/2 | Know the clinical signs and features of deformations and diseases of hooves in horses. To be able to use schemes of differential diagnosis and treatment of animals according to these pathologies. | Submission of laboratory work #23. Carrying out independent work #23 (including in elearn) | **8** |
| **Total** |  |  |  | **28** |
| **Total for Semester** | **70** |
| **Test** |  |  |  | **30**  |
|  **9 Semester** |
|  **Module 5** |
|  |  |  |  |  |
| Topic 24 Diseases in the head area (injuries, diseases of bones and peripheral nerve endings). | 2/2 | To know the clinical signs and peculiarities of surgical pathologies in the head area (injuries, diseases of bones and peripheral nerve endings). To be able to use schemes of differential diagnosis and treatment of animals for these pathologies. | Submission of laboratory work #1. Performing independent work #1 (including in elearn) | **4** |
| Topic 25. Diseases in the oral cavity. | 2/2 | Know the clinical signs and features of diseases in the oral cavity. To be able to use schemes of differential diagnosis and treatment of animals according to these pathologies. | Submission of laboratory work #2. Carrying out independent work #2 (including in elearn) | **4** |
| Topic 26. Diseases of the organ of hearing. | 2/2 | Know general information about the anatomical structure and physiology of the organ of hearing in animals. Be able to carry out their diagnosis and treatment. | Submission of laboratory work #3. Carrying out independent work No. 3 (including in elearn) | **4** |
| Topic 27. Diseases in the area of the neck and withers. | 2/2 | To be able to provide assistance to animals for surgical pathologies in the area of the neck and nape. Conduct their diagnosis and prevention. | Submission of laboratory work #4. Carrying out independent work #4 (including in elearn) | **4** |
| Topic 28. Diseases in the chest cavity. | 2/2 | Be able to carry out differential diagnosis and treatment of diseases in the area of the chest cavity. | Submission of laboratory work No. 5. Carrying out independent work No. 5 (including in elearn) | **4** |
| Topic 29. Diseases in the abdominal cavity. | 2/2 | Be able to carry out differential diagnosis and treatment of diseases in the abdominal cavity. | Submission of laboratory work No. 6. Carrying out independent work #6 (including in elearn) | **4** |
| Topic 30. Diseases of the spine. | 2/2 | To be able to carry out differential diagnosis and treatment of animals with pathologies in the area of the spine. | Submission of laboratory work #7. Carrying out independent work #7 (including in elearn) | **4** |
| Topic 31. Diseases in the area of the pelvic cavity. | 2/2 | Be able to carry out differential diagnosis and treatment of animals with diseases in the area of the pelvic cavity. | Submission of laboratory work #8. Carrying out independent work #8 (including in elearn) | **4** |
| **Total** |  |  |  | **32** |
| **Module 6** |
| Topic 32. Diseases of genitourinary organs. | 2/2 | To be able to carry out differential diagnosis and treatment of surgical pathology of the genitourinary organs of animals. To know the causes of their occurrence. | Submission of laboratory work No. 9. Completion of independent work No. 9 (including in elearn) | **4** |
| Topic 33. Diseases in the area of the mammary gland. | 2/2 | Be able to carry out differential diagnosis and treatment of animals with diseases in the area of the mammary gland. | Submission of laboratory work #10. Carrying out independent work #10 (including in elearn) | **4** |
| Topic 34. Static and dynamic limb apparatus. Classification of lameness. Diagnosis of limb diseases. | 2/2 | Know and understand: static and dynamic limb apparatus, classification of lameness. Be able to diagnose limb diseases. | Submission of laboratory work #11. Carrying out independent work #11 (including in elearn) | **4** |
| Topic 35. Diseases in the area of the thoracic limb. | 2/2 | Be able to carry out differential diagnosis and treatment of animals with diseases in the area of the thoracic limb. | Submission of laboratory work #12. Carrying out independent work #12 (including in elearn) | **4** |
| Topic 36. Diseases in the area of the pelvic limb. | 2/2 | Be able to carry out differential diagnosis and treatment of animals with diseases in the area of the pelvic limb. | Submission of laboratory work #13. Carrying out independent work No. 13 (including in elearn) | **4** |
| Topic 37. Plastic surgery. | 2/2 | To know the basics of plastic surgery and the pathological conditions that require its use. | Submission of laboratory work #14. Carrying out independent work #14 (including in elearn) | **4** |
| Topic 38. Minimally invasive surgery. | 2/2 | Know the indications, advantages and disadvantages of minimally invasive operations. Understand the expediency of their application. | Submission of laboratory work #15. Carrying out independent work #15 (including in elearn) | **4** |
| **Total for Semester** | **70** |
| **Exam** |  |  |  | **30**  |
| **Total for Course** | **100** |

**ASSESSMENT POLICY**

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| ***Deadlines and exam*** ***retaking policy:*** | Assignments submitted after the deadline without valid reasons will be graded lower. Resitting of modules will be allowed with the permission from the lecturer and in the presence of valid reasons (e.g. medical reasons). |
| ***Academic integrity policy:*** | Cheating during tests and exams is strictly prohibited (including the use of mobile devices). Coursework and research papers must contain correct citations for all sources used. |
| ***Attendance policy:*** | Class attendance is mandatory. In case of objective reasons (such as illness or international internships), individual learning may be allowed (in online format by the approval of the dean of the faculty). |

**SCALE OF ASSESSMENT OF STUDENT KNOWLEDGE** **AND SKILLS**

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| **Student rating, points** | **National grade based on exam results** |
| **exams** | **credits** |
| 90-100 | excellent | pass |
| 74-89 | good |
| 60-73 | satisfactory |
| 0-59 | unsatisfactory | fail |

**RECOMMENDED SOURCES OF INFORMATION**

1. Загальна ветеринарна хірургія / за ред. проф. Борисевича В.Б. – К.: Вища школа, 1992.
2. Загальна ветеринарно-медична хірургія / за ред. проф. Борисевича В.Б. – К.: Науковий світ, 2001.
3. Загальна ветеринарна хірургія / за ред. проф. Панька І.С. – Біла Церква, 1998.
4. Практикум із загальної та спеціальної хірургії / за ред. проф. Калашніка І.О. – К.: Урожай, 1995.
5. Спеціальна ветеринарна хірургія / за ред. проф. Борисевича В.Б. – К.: Вища школа, 1993.
6. Борисевич В.Б., Панько І.С., Терес М.О., Іздепский В.Й. Спеціальна ветеринарнам хірургія. – К.: Видавн. УСГА, 1993. – 493с.
7. Калашнік І.О., Панько С.І., Передера Б.Я., Русінов О.Ф., Юрченко Л.І., Сарбаш Д.В. Практикум із загальної та спеціальної хірургії . – К.: Урожай, 1995. – 252 с.
8. Поваженко І.О., Борисевич В.Б. Болезни конечностей животных. – К.: Урожай, 1987. – 204 с.
9. Борисевича В.Б. Ветеринарна ортопедія і офтальмологія. – К.: Урожай, 1991. – 133с.
10. Панько І.С., Власенко В.М., Гамота А.А., Рубленко М.В., Іздепський В.Й., Петренко О.Ф., Ільницький М.Г. Спеціальна ветеринарна хірургія. – Біла Церква, БДАУ, 2003. – 416 с.
11. Борисевич В.Б., Tepeс M.O., Салістий В.Т. Хірургія, офтальмологія і ортопедія. — К.: Вища шк., 1988. — 287 с.
12. . Кузнєцов О.К «Ветеринарна хірургія, ортопедія і офтальмологія».-К.: Вища школа, 1978
13. . Петренко О.Ф та ін.«Хірургія ветеринарної медицини».-К.:Вища освіта, 2005.- 399
14. . Навчальний довідник – НМЦ, 2006
15. https://pubmed.ncbi.nlm.nih.gov
16. https://www.oie.int/en/home/
17. https://uk.wikipedia.org/