

# SYLLABUS OF EDUCATIONAL COMPONENT



## PHYSIOLOGY AND ETHOLOGY OF BIRDS

|                     |                         |                      |  |
|---------------------|-------------------------|----------------------|--|
| specialty           | 211 veterinary medicine | mandatory discipline | selective                              |
| educational program | Veterinary medicine     | faculty              | veterinary medicine                    |
| educational level   | second (master's) level | chair                | physiology and biochemistry of animals |

### TEACHER

Larisa Vodopianova - <http://btu.kharkov.ua/wp-content/uploads/2022/12/VodopianovaLA.pdf>



**Higher education - veterinary specialty**

**Scientific degree - candidate of biological sciences 03.00.19 - cryobiology**

**Academic title - associate professor**

**Work experience - more than 17 years**

**Indicators of professional activity in the subject of the course:**

- Author of more than 20 methodological instructions for practical and independent work on the subject of the course;
- Advanced qualification for international internship at the National Research Center "Institute of Experimental and Clinical Veterinary Medicine" on the topic: Modern laboratory methods of diagnosis used in physiological research. NNC "Institute of Experimental and Clinical Veterinary Medicine", 180/6 ECTS credits, 2024.
- Internship at the "Odesa International Academy" on the topic: "Neurophysiology with the basics of zoopsychology", 120/4 ECTS credits, 2023.
- International certificate Certificate of international advanced training (webinar) - EUROPEAN ACADEMY OF SCIENCES & RESEARCH (EASR), Hamburg, Germany; " Introduction to systematic review and meta-analyses course", 09/22/2022, 0.46 ECTS credits (14 hours);
- International certificate Civil organization "International Foundation of Scientists and Educators" (IESF), Kyiv, Ukraine and Instytut Badawczo-Rozwojowy Lubelskiego Parku Naukowa Technologicznego Sp., Lublin, Poland. Certificate of international advanced training (webinare) "Non-formal education in the preparation of bachelors in the countries of the European Union and Ukraine", 20.02.2023, 1.5 ECTS credits (45 hours);
- Co-author / author of more than 130 thematic publications;
- Participant of scientific and methodical conferences on the subject of the course.

|       |            |          |                         |                |   |
|-------|------------|----------|-------------------------|----------------|---|
| phone | 0674211529 | e - mail | vodopyanova49@gmail.com | remote support | Moodle , Google Classroom , YouTube - <a href="https://www.youtube.com/@animalsphysiology">https://www.youtube.com/@animalsphysiology</a> |
|-------|------------|----------|-------------------------|----------------|---|

### GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT (DISCIPLINE)

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|--------|--|
| Goal   | providing students with theoretical and practical knowledge of bird behavior and the course of physiological processes in the body of birds of various species and teaching methods for managing physiological functions to increase productivity and improve the quality of livestock products. |
| Format | lectures, practical classes, independent work, individual tasks, laboratory work, teamwork   |

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|  |  |
| <b>Detailing of learning outcomes and forms of their control</b> | <ul style="list-style-type: none"> <li>Ability to think abstractly, analyze and synthesize, conduct research at the appropriate level, learn and master modern knowledge, develop strategies for safe, sanitary animal keeping, know the terminology of ethology and zoopsychology, be able to use it correctly in your work (SC2, SC3, SC7, PLO3) / individual tasks, training</li> <li>Ability to apply knowledge in practical situations, make informed decisions, communicate with representatives of other professional groups of various levels, formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of contagious and non-communicable diseases, as well as production and technological processes at enterprises on keeping, breeding or exploitation of animals (SC2, SC3, SC7, PLO3)/ individual tasks</li> <li>The ability to use tools, special devices, devices, laboratory equipment and other technical means to carry out the necessary manipulations during professional activity, to develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies, to carry out educational activities among industry workers and population (SC1) / individual tasks, essay</li> <li>implementation of environmental protection mechanisms, application of knowledge of biosafety, bioethics and animal welfare in professional activity, knowledge of rules and requirements of biosafety, bioethics and animal welfare in the process of professional (SC2, SC3, SC7, PLO3, PLO1) / training, individual tasks</li> </ul> |
| <b>Scope and forms of control</b>                                | 3 ECTS credits (90 hours): 12 hours of lectures, 18 hours of laboratory and practical work, 60 hours of independent work, current control (2 sections); final control – credit   |
| <b>Teacher requirements</b>                                      | timely completion of practicals, activity, teamwork  |
| <b>Enrollment conditions</b>                                     | credit / exam  |

#### COMPLEMENTS THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

|                     |   |                                  |  |
|---------------------|---|----------------------------------|--|
| <b>Competencies</b> | <p>SC1. To know and correctly use the terminology of veterinary medicine.</p> <p>SC2. Use information from national and foreign sources to develop diagnostic, treatment and business strategies.</p> <p>SC3. To determine the essence of physico-chemical and biological processes that occur in the body of animals in normal and pathological conditions.</p> <p>SC7. Formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of infectious and non-infectious diseases, as well as production and technological processes at enterprises for keeping or exploiting animals of various classes and species.</p> | <b>Program learning outcomes</b> | <p>PLO1. Know and correctly use the terminology of veterinary medicine</p> <p>PLO 3. Determine the essence of physico-chemical and biological processes that occur in the body of animals in normal and pathological conditions.</p> |
|---------------------|---|----------------------------------|--|

#### STRUCTURE OF THE EDUCATIONAL COMPONENT

| Section 1        |  |             |  |                                       |  |
|------------------|--|-------------|--|---------------------------------------|--|
| <b>Lecture 1</b> | The concept of physiology and ethology as sciences. Blood physiology.                        | <b>LC 1</b> | Research methods in physiology and ethology . Blood physiology. Blood groups of birds. Study of the properties of blood cells of birds. Hematopoiesis. | <b>Independent and practical work</b> | <ol style="list-style-type: none"> <li>Basic physiological and ethological concepts.</li> <li>Factors that increase bird productivity.</li> <li>Features of keeping birds at home and in production</li> </ol> |
| <b>Lecture 2</b> | Physiological foundations of hemodynamics in birds . Physiology of respiration. Gas exchange | <b>LC 2</b> | Hemodynamics , cardiovascular system and lymphatic circulation in birds . Mechanism of respiration   |                                       |  |
| <b>Lecture 3</b> | Features of digestion and metabolism in birds  | <b>LC 3</b> | Features of digestion in birds . Features of metabolism, energy processes and thermoregulation in birds (species differences)                          |                                       |  |
| <b>Lecture 4</b> | Physiology of excretory organs . General   | <b>LC 4</b> | Study of secretion processes. Physiology of the endocrine  |                                       |  |

|                  |   |             |   |                                   |  |
|------------------|---|-------------|---|-----------------------------------|--|
|                  | endocrinology of birds  |             | glands of the bird body   |                                   |  |
|                  |   | <b>LC 5</b> | <b>Section test 1</b>   |                                   |  |
| <b>Section 2</b> |   |             |   |                                   |  |
| <b>Lecture 5</b> | General idea of the sensory organs of birds   | <b>LC 6</b> | Innate and acquired behavior of birds   | <b>Independent practical work</b> | 4. Instincts in birds<br>5. Mental processes in birds<br>6. Behavioral characteristics of companion birds, training, behavior correction |
| <b>Lecture 6</b> | General physiology of the avian CNS. Brain and spinal cord. Stress, adaptation, conflict. | <b>LC 7</b> | Cognitive ethology: memory, attention, communication . Social behavior, group life, territoriality, migration |                                   |  |
|                  |   | <b>LC 8</b> | Altruistic behavior. Reproductive behavior. Mating systems. Parental care of offspring                        |                                   |  |
|                  |   | <b>LC 9</b> | Evolution of behavior . Peculiarities of behavior of birds of different species . <b>Section test 2</b>       |                                   |  |

### BASIC LITERATURE AND METHODOLOGICAL MATERIALS

|                   |  |                               |  |
|-------------------|--|-------------------------------|--|
| <b>Literature</b> | <p>1.Мазуркевич А.Й., Карповський В.І., Камбур М.Д. та ін. Фізіологія тварин; Підручник; Вид.друге/ За ред. А.Й Мазуркевича., В.І.Карповського.- Вінниця: Нова Книга, 2012 – 424с.</p> <p>2. Фізіологія сільськогосподарських тварин (практикум): видання друге доопрацьоване./За ред. А.Й.Мазуркевича, В.О.Трокоза, В.І.Карпавського та інш. –К.: Центр учбової літератури,2015.- 240с.</p> <p>3. Animal Physiology, From Genes to Organisms, Sherwood, Lauralee; Klandorf, Hillar; Yancey, 2013, Second edition/ Publisher: Cengage Learning, 896p.</p> <p>4. Physiology practical / S.Borbély, L. Détári, T. Hajnik, K. Schlett. – Department of Physiology and Neurobiology: Eötvös Loránd University, 2013. – 215 p.</p> <p>5. Чайченко Г.М. Фізіологія людини і тварин / Чайченко Г.М., Цибенко В.О., Сокур В.Д. – К.: Вищи школа, 2004. – 463 с.</p> <p>6. Sturkie`s Avian Physiology (Seventh Edition), Academic press- 2022, - 1457 P.- <a href="https://doi.org/10.1016/B978-0-12-819770-7.00023-2">https://doi.org/10.1016/B978-0-12-819770-7.00023-2</a></p> <p>7. The Cornell lab of ornithology handbook of bird biology edited by Irby J. Lovette John W. Fitzpatric Edition: Princeton University Press (3e, 2016)-733p.</p> | <b>Methodological support</b> | <p>1 . Normal physiology of animals: Test's book / <b>Vodopyanova L.</b> , Bobritska O. - Kharkiv, 2021. - 108 p.</p> <p>2. Animal physiology. Test tasks for writing test papers for foreign students of the second year 6.110101 "Veterinary medicine". Yugai K.D., Bobrytska O.M., <b>Vodop'yanova L.A.</b> // Kh.: RVV KhDZVA, 2021. – 52 p.</p> <p>3. Physiology and ethology of birds. Workbook for students of the 1st and 2nd year of 211 of the first (bachelor's) and second (master's) degree of higher education - 211 "Veterinary medicine" / Yugai K.D., Bobrytska O.M., <b>Vodop'yanova L.A., Zhukova I.O.</b> // Kh.:, 2024.</p> |
|                   |  |                               |  |

| EVALUATION SYSTEM  |                            |           |   |
|--|----------------------------|-----------|---|
| SYSTEM   |                            | POINTS    | ACTIVITY THAT IS ASSESSED   |
| Final assessment (differential credit, exam)   | 100 ECTS points (standard) | up to 100 | 40% - final testing<br>60% - student's current work during the semester |
|  |                            | up to 100 | 100% - average grade for sections                                       |
| Final assessment (non-differential credit)   | 100 point ECTS (standard)  |           |   |
| Rating evaluation  | 100-point total            | up to 30  | 30% - answers to test questions   |
|  |                            | up to 30  | 30% - the result of mastering the independent work block                |
|  |                            | up to 40  | 40% - student activity in classes (oral answers)                        |
| NORMS OF ACADEMIC ETHICS AND CHARITY   |                            |           |   |
| All participants in the educational process (including students) must adhere to the code of academic integrity and the requirements set forth in the regulation " On Academic Integrity of Participants in the Educational Process of DBTU ": to demonstrate discipline, good manners, respect each other's dignity, show kindness, honesty, and responsibility. |                            |           |   |