# SYLLABUS OF THE EDUCATIONAL COMPONENT

## INFECTIOUS DISEASES OF ANIMALS IN TROPICAL AND SUBTROPICAL REGIONS

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| **Specialty** | **Veterinary medicine** | **The obligation of discipline** | **Selective** |
| **Field of knowledge** | **Veterinary medicine** | **Faculty** | **Veterinary medicine** |
| **Level of higher education** | **Master's degree** | **Department** | **Epizootology and microbiology** |

### TEACHER


**Severyn Raisa Vasilivna**


**Higher education – specialty: veterinary medicine**
**Academic degree – Candidate of Veterinary Sciences 16. 00. 03 – Veterinary Microbiology and Virology (2012)**
**Academic title – Associate Professor of the Department of Epizootology and Microbiology**
**Work experience – 43 years**
**Indicators of professional activity on the course topic:**

- Author and co-author of more than 95 scientific works, including scientific articles and abstracts of reports, 5 declarative patents for inventions, 5 scientific, practical and methodological recommendations, 2 scientific manuals, 2 Technical Specifications of Ukraine.
- Author and co-author of more than 55 educational and methodological recommendations and instructions for laboratory and practical classes in the courses: "Episootology and Infectious Diseases", "Species Episootology", "Special Episootology", "Laboratory Diagnostics of Animal Diseases".

Certificate of advanced training at the National Scientific Center "Institute of Experimental and Clinical Veterinary Medicine", Kharkiv, International sub-qualification, Lublin (Republic of Poland, 2023) in the specialty "Veterinary Medicine", specialization "Veterinary Microbiology, Epidemiology, Infectious Diseases and Immunology" (2023).

Participant in scientific and methodological conferences and symposia, including international ones.


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## GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

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| **Purpose** | 1. formation of knowledge and skills to recognize signs of infectious diseases that are not even traditional for the regions of Ukraine, to quickly navigate in the selection and application of the necessary regulated methods of confirming or refuting the diagnosis, including the final, laboratory one;<br>2. acquiring skills in forecasting, recognizing threats, identifying causes, differential diagnostics and developing rational measures for the prevention, response and elimination of both transboundary, especially dangerous and poorly studied epizootically significant animal diseases. |
| **Format** | lectures, practical classes, independent work, individual tasks, laboratory work, teamwork |
| **Detailing of learning results and forms of their control** | • ability to assess the health status of animals suffering from infectious diseases / individual practical tasks<br>• ability to predict the course of infectious diseases and the effectiveness of control measures / individual practical exercises<br>• ability to assess the quality of treatment and preventive measures for infectious diseases / individual practical tasks<br>• ability to make informed decisions, carry out educational activities among industry workers and the population / individual tasks on the analysis of the regulatory framework |
| **Scope and forms of control** | 3 ECTS credits ( 90 hours ): 12 hours of lectures, 30 hours of laboratory classes, 48 hours of independent work ; current control (2 chapters ); final control – differentiated assessment. |
| **Requirements of the teacher** | timely completion of laboratory and practical tasks, activity, teamwork |
| **Enrollment conditions** | according to the curriculum |

## COMPLEMENTS THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

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| **Competencies** | GC1. Ability to abstract thinking, analysis and synthesis<br>GC 2. Ability to apply knowledge in practical situations<br>GC 3. Knowledge and understanding of the subject field and profession<br>GC 9. Ability to make informed decisions<br>GC 10. Ability to communicate with representatives of other professional groups of various levels (with experts of other fields of knowledge/types of economic activity)<br>SC 2. Ability to use tools, special devices, instruments, laboratory equipment and other technical means to carry out the necessary manipulations during professional activities.<br>SC 3. Ability to comply with the rules of labor protection, asepsis and antiseptics during professional activities.<br>SC 4. Ability to conduct clinical studies in order to formulate conclusions about the condition of animals or establish a diagnosis.<br>SC 6. Ability to select, pack, fix and send samples of biological material for laboratory research<br>SC 7. Ability to organize and conduct laboratory and special diagnostic studies and analyze their results<br>SC 8. Ability to plan, organize and implement measures to treat animals of different classes and species, sick with non-communicable, infectious and invasive diseases<br>SC 10. Ability to develop strategies for safe, sanitary-related animal husbandry.<br>SC 12. Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans.<br>SC 13. Ability to develop strategies for the prevention of diseases of various etiologies.<br>SC 19. Ability to carry out educational activities among industry workers and the population. | **Program learning outcomes** | PLO 1. Know and competently use the terminology of veterinary medicine<br>PLO 2. Use information from domestic and foreign sources to develop diagnostic, therapeutic and business strategies<br>PLO 4. Collect anamnestic data during registration and examination of animals, make decisions on the choice of effective methods of diagnosis, treatment and prevention of animal diseases.<br>PLO 5. Establish a connection between the clinical manifestations of the disease and the results of laboratory tests.<br>P LO 6. Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies.<br>PLO 7. Formulate conclusions on 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, breeding or operating animals of various classes and species.<br>PLO 8. 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 for veterinary purposes.<br>PLO 9. Develop measures aimed at protecting the population from diseases common to animals and humans.<br>PLO 15. Know the rules for storing various pharmaceuticals and biological products, the methods of their enteral or parenteral administration, understand the mechanism of their action, interaction and complex effect on the animal body.<br>PLO 17. Know the rules and requirements of biosafety, bioethics and animal welfare.<br>PLO 18. Carry out accounting reporting during professional activities.<br>PLO 19. Carry out educational activities among industry workers and the population. |

## STRUCTURE OF THE EDUCATIONAL COMPONENT

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| **Chapter 1. Arboviruses and viral tropical diseases of animals**<br>**Epizootic features and course, comprehensive diagnostics and anti-epizootic measures of viral and arbovirus diseases of animals: Nairobi disease, Rift Valley fever, hemorrhagic fevers (West Nile, Dengue, Crimean-Congo), African horse sickness, Equine viral arteritis, Bluetongue/Bluetongue, Rinderpest, Lumpy skin disease and Sheep and Goat pox** | | | | | |
| **Lecture 1** | Arbovirus infections of animals | **LC 1** | Diagnosis, prevention and control measures for Nairobi Disease of sheep and goats | Independent work | Chapter 1.<br>Arbovirus and viral tropical diseases of animals.<br>1. Differential diagnosis of hemorrhagic arbovirus fevers of animals, their epidemiological significance and threats.<br>2. Differential diagnosis of poorly studied and epizootically significant viral diseases of animals in tropical countries. |
| **Lecture 2** | Features of the course of viral diseases of horses (Acute Cystitis, Viral Arteritis) and cattle (CRC, Bluetongue, Lump-Pox, Sheep and Goat Pox) in tropical conditions | **LC 2** | Diagnosis, prevention and control measures for Rift Valley Fever | | |
| **Lecture 3** | Peculiarities of the course of quarantine and especially dangerous viral animal diseases (foot-and-mouth disease, rabies, highly contagious influenza) in tropical countries | **LC 3** | Diagnosis, prevention and control measures against hemorrhagic arbovirus fevers (West Nile fever, Dengue fever, Crimean-Congo hemorrhagic fever) | | |
| | | **LC 4** | Diagnosis, prevention and control measures against African horse sickness | | |
| | | **LC 5** | Diagnosis, prevention and control measures against Bluetongue (Bluetongue) in cattle. | | |
| | | **LC 6** | Diagnosis, prevention and control measures against quarantine diseases of cattle caused by capripoxviruses (lumpy dermatitis, sheep and goat pox) | | |
| | | **LC 7** | Diagnosis, prevention and control measures for equine viral arteritis. | | |
| **Chapter 2. Bacterial and fungal tropical diseases of animals**<br>**Epizootic features and course, comprehensive diagnostics and anti-epizootic measures of bacterial, fungal, rickettsial and mycoplasmal animals: "Forgotten tropical diseases (NID)" - Tuberculosis, Foot and Mouth Disease, Melioidosis, Brucellosis; Yersiniosis/Camel Plague, Rickettsioses: Q-fever, Tularemia; Contagious agalactia of sheep and goats, Cattle PEP, Botulism and Tetanus, Epizootic lymphangitis of horses.** | | | | | |
| **Lecture 4** | Features of the course of the "Forgotten Tropical Diseases (NID)" tuberculosis, gangrene, melioidosis, brucellosis | **LC 8** | Diagnosis, prevention and control measures against highly contagious avian influenza and pandemic triple influenza | Independent work | Chapter 2.<br><br>Bacterial and fungal tropical diseases of animals.<br>1. Differential diagnosis of rickettsioses and yersinioses of animals, their epidemiological significance and threats.<br>2. Differential diagnosis of |
| **Lecture 5** | Yersiniosis (camel plague) and rickettsiosis (Q fever, tularemia) | **LC 9** | Diagnosis, prevention and control measures against camel plague | | |
| **Lecture 6** | Mycoses (epizootic lymphangitis of | **LC 10** | Diagnosis, prevention and control measures against animal rickettsioses (Q fever, | | |

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| | horses) and mycoplasmosis (contagious agalactia of sheep and goats, CPP of cattle) of animals | | tularemia) in animals. | | mycoplasmosis. Epizootic significance of contagious pleuropneumonia of cattle, features of prevention.<br>3. Features of the course, diagnosis and differential diagnosis of intestinal bacterioses (salmonellosis, colibacteriosis) and mycotoxicoses in tropical climates |
| | | **LC 11** | Diagnosis, prevention and control measures for Lyme disease | | |
| | | **LC 12** | Diagnosis, prevention and control measures for contagious agalactia of sheep and goats | | |
| | | **LC 13** | Diagnosis, prevention and control measures against botulism and tetanus in animals | | |
| | | **LC 14** | Diagnosis, prevention and control measures against equine epizootic lymphangitis | | |
| | | **LC 15** | Features of diagnostics, prevention and control measures against foot-and-mouth disease, melioidosis and tuberculosis of animals. | | |

## BASIC LITERATURE AND METHODOLOGICAL MATERIALS

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| **Literature** | 1. Karysheva A. F. Special epizootology: textbook. Kyiv: Higher Education, 2002. 703 p.<br>2. Infectious diseases of sheep and goats: a textbook / O. A. Tkachenko et al. Zhytomyr: Polissya, 2012. 372 p.<br>3. Zlonkevych Ya., Oleksiuk I., Kravtsiv Yu. Infectious diseases of horses: a textbook. Lviv, 2006. 204 p.<br>4. Sapronose infectious diseases of animals / L.E. Kornienko, V.V.<br>5. Nedosekov, V.O. Busol et al.: monograph. – Ed. L.E. Kornienko,<br>6. V.O. Busola. – Bila Tserkva: Bila Tserkva. State Agricultural University, 2010. -306 p. | **Methodological support** | -http:// www.consumer.gov.ua State Service for Food and Consumer Protection of Ukraine.<br>-http://www.who.int/en/ - World Health Organization (WHO) website.<br>-http://www.oie.int/ - website of the World Organization for Animal Health (International Office of Epizootics - OIE).<br>-http://vetlabresearch.gov.ua/ – State Research Institute for Laboratory Diagnostics and Veterinary Sanitary Expertise;<br>- http://www.biocontrol.com.ua/ – State Scientific and Control Institute of Biotechnology and Microorganism Strains.<br>- http://ivm.kiev.ua/golovna.html – Institute of Veterinary Medicine of the National Agrarian Academy of Sciences of Ukraine;<br>- http://www.iso.org. – International Organization for Standardization(ISO);<br>-http://www.nbuv.gov.ua Official website of the V.I. Vernadsky National Library of Ukraine.<br>- http://vet.in.ua/ Veterinary information resource of Ukraine. |

## EVALUATION SYSTEM

| SYSTEM | | POINTS | ACTIVITY THAT IS ASSESSED |
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| **Final assessment (different credit, exam)Final evaluation** | **100 ECTS points (standard)** | **up to 100** | **40 % - Final testing** |
| | | | **60 % - student's current work during the semester** |
| **Final assessment (non-differential credit)** | **100 points ECTS (standard)** | **up to 100** | **100 % - average grade for sections** |
| **Rating of section** | **100 points total** | **up to 30** | **30 % - answers to test questions** |
| | | **up to 30** | **30 % - the result of mastering the block of independent work** |
| | | **up to 40** | **40 % - student activity in class (oral answers)** |

## NORMS OF ACADEMIC ETHICS AND INTEGRITY

**All participants in the educational process (including students) must adhere to the code of academic integrity and the requirements stipulated in the regulation "On Academic Integrity of Participants in the Educational Process of SBTU": to demonstrate discipline, good manners, respect each other's dignity, show kindness, honesty, and responsibility.**