SYLLABUS OF THE EDUCATIONAL COMPONENT

COMPLEX DIAGNOSTICS OF INFECTIOUS DISEASES IN AQUACULTURE

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: "Epizootology and Infectious Diseases", "Species Epizootology", "Special Epizootology", "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.

phone	**0661430276**	**e-mail**	**Raisa.severin2018@gmal.com**	**distance support**	**Moodle**

GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

Purpose	Formation of students knowledge and skills to recognize signs of infectious diseases in aquaculture, to apply measures to confirm or refute the diagnosis. The main objectives of the course are to acquire skills in studying the classification of infectious diseases in aquaculture, familiarization with the symptoms of infectious diseases and their main pathogens, identification of the causes of diseases, differential diagnosis and development of rational measures for the prevention, regulation and elimination of epizootics.
Format	lectures, laboratory classes, independent work, individual tasks, teamwork.
Detailing of learning results and forms of their control	• ability to assess the health status of animals suffering from infectious diseases (GC1, SC2, PLO 1) / individual practical tasks • ability to conduct clinical studies in order to formulate conclusions about the condition of animals or establish a diagnosis. (GC 9, SC7, PLO) individual practical tasks • ability to predict the course of infectious diseases and the effectiveness of control measures (GC2, SC4, PLO 8) / individual practical exercises
Scope and forms of control	3 ECTS credits (90 hours): 18 hours of lectures, 36 hours of laboratory classes; 36 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

COMPLIANCE WITH THE EDUCATION STANDARD AND EDUCATIONAL PROGRAM

Competencies	GC1. Ability to abstract thinking, analysis and synthesis GC 2. Ability to apply knowledge in practical situations GC 7 Ability to conduct research at an appropriate level GC 8 Ability to learn and master modern knowledge GC 9. Ability to make informed decisions 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) GC 11 Ability to evaluate and ensure the quality of work performed SC 6. Ability to select, pack, fix and send samples of biological material for laboratory research SC 7. Ability to organize and conduct laboratory and special diagnostic studies and analyze their results SC 8. Ability to plan, organize and implement measures	**Program learning outcomes**	PLO 1. Know and competently use the terminology of veterinary medicine PLO 2. Use information from domestic and foreign sources to develop diagnostic, therapeutic and business strategies P LO 6. Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies. 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. PLO 9. Develop measures aimed at protecting the population from diseases common to animals and humans. PLO 19. Carry out educational activities among industry workers and the population.

	to treat animals of different classes and species, sick with non-communicable, infectious and invasive diseases SC 13. Ability to develop strategies for the prevention of diseases of various etiologies.				

STRUCTURE OF THE EDUCATIONAL COMPONENT

Chapter 1.

Viral diseases in aquaculture.

Study of etiology, epizootological features, pathogenesis, clinical and pathological signs, diagnostics, prevention and control measures of viral diseases in aquaculture such as spring viremia of carp, carp pox, infectious gill necrosis of carp, viral branchionecrosis

Lecture 1	**Law of Ukraine on Aquaculture.**	**LC 1-2**	Classification of aquaculture and aquatic organisms, their importance in the national economy	Independent work	1. Pathogens and pests of ornamental fish in home ponds. 2. Features of the treatment of ornamental aquaculture facilities when grown on an industrial scale. 3. Modern range of drugs used in ornamental aquaculture.
		LC 3-4	Comprehensive diagnostics, measures to combat and prevent viral diseases of aquarium fish		
Lecture 2	**Classification of infectious diseases in aquaculture.**	**LC 5-6**	Comprehensive diagnostics, control and prevention measures for viral diseases of freshwater fish		
Lecture 3	**Viral diseases of freshwater aquaculture**	**LC 7**	Comprehensive diagnostics, measures to combat and prevent viral diseases of mariculture representatives		
Lecture 4	**Viral diseases of ornamental aquaculture**				
		LC 8	Comprehensive diagnostics, measures to combat and prevent viral diseases of mollusks, crustaceans and amphibians in aquarium conditions		

Chapter 2. Nosological profile of bacterial and fungal diseases in aquaculture

Study of etiology, epizootological features, pathogenesis, clinical and pathological signs, methods of diagnosis, prevention and measures to combat bacterial and mycosis diseases of aquarium aquatic organisms, freshwater fish

Lecture 1	Classification and clinical and epizootic process in bacterial diseases of aquarium fish	**LC 1**	Bacterial diseases of aquarium fish: flexibacteriosis, columnariosis, lepidortosis, ulcerative disease	Independent work	1. Preventive measures during fish transportation. 2. Main diseases of marine ornamental aquaculture facilities. 3. Features of fish treatment in the early stages of disease development
Lecture 2	Classification and clinical and epizootic process in bacterial diseases of freshwater fish	**LC 2**	Bacterial diseases of aquarium fish: aeromoniasis, pseudomoniasis (white skin), fin rot, tuberculosis		
Lecture 3 **Lecture 4**	Classification and clinical and epizootic process in mycoses of aquarium aquatic organisms Classification and clinical and epizootic process in mycoses of aquarium aquatic organisms	**LC 3**	Mycoses of aquarium fish: branchiomycosis, saprolegniosis, plistophorosis, ichthyosporidiosis		
		LC 4	Bacterial diseases of freshwater fish. Fish proteoses. Bacterial hemorrhagic septicemia.		
		LC 5	Fish diseases caused by enterobacteria. Yersiniosis.		
		LC 6	Bacterial diseases of fish: flexibacteriosis, columnariosis		
		LC 7-8	Fish mycoses: branchiomycosis, saprolegniosis and achliosis, ichthyophonosis, deep mycosis.		

BASIC LITERATURE AND METHODOLOGICAL MATERIALS

Literature

1. Karysheva A. F. Special epizootology: textbook. Kyiv: Higher Education, 2002. 703 p.
2. Vovk N.I., Bozhik V.Y. Ichthiopathology. Kyiv, 2014. 308 p.
3. Davydov O.M., Temnikhanov Y.D. Fundamentals of veterinary and sanitary control in fish farming. Kyiv, 2004. 144 p.
4. Davydov O.M., Temnikhanov Y.D. Diseases of freshwater fish. Kyiv, 2004. 543 p.
5. Zazharska N.M., Kutsak R.S., Biben I.A. et al. Veterinary and sanitary examination. Dnipro, 2017. 193 p.
6. Nakonechna M.G., Petrenko O.F., Postoy V.V. Diseases of fish with the basics of fish farming.-K.: Nauk. world, 2003.-222 p.: ill..
7. Poltavchenko T.V., Bogatko N.M., Parfenyuk I.O. Sanitation and hygiene in fish farming. Laboratory practical.- Rivne: NUVGP, 2016.- 120 p.

Methodological support

1. Golovko V. O., Severyn R. V., Ivanchenko I. M., Gontar A. M., Savenko M. M. Diagnostics, differential diagnostics, organization of measures to prevent and combat mycoses in aquaculture: methodological guidelines for conducting laboratory and practical classes in special epizootology for students of the 3rd-4th years of the Faculty of Veterinary Medicine. Kharkiv: KhDZVA, 2021. 15 p.
2. Golovko V. O., Severyn R. V., Ivanchenko I. M., Gontar A. M., Shtager G. M. Diagnostics, differential diagnostics, organization of measures to prevent and combat pike plague: methodological guidelines for conducting laboratory and practical classes in special epizootology for students of the 3rd-4th years of the Faculty of Veterinary Medicine. Kharkiv: KhDZVA, 2022. 17 p.
3. Golovko V. O., Severyn R. V., Ivanchenko I. M., Gontar A. M., Shtager G. M. Diagnostics, differential diagnostics, organization of measures to prevent and combat carp pox: methodological guidelines for conducting laboratory and practical classes in special epizootology for students of the 3rd-4th years of the Faculty of Marine Sciences. Kharkiv: KhDZVA, 2023. 17 p.
4. Golovko V. O., Severyn R. V., Ivanchenko I. M., Gontar A. M., Shtager G. M. Diagnostics, differential diagnostics, organization of measures to prevent and combat dermatophytosis in aquaculture: methodological guidelines for conducting laboratory and practical classes in special epizootology for students of the 3rd-4th years of the Faculty of Marine Sciences. Kharkiv: KhDZVA, 2024. 17 p.
5. Golovko V. O., Severyn R. V., Ivanchenko I. M., Gontar A. M., Shtager G. M. Diagnostics, differential diagnostics, organization of measures for the prevention and control of bacterial diseases in aquaculture: methodological guidelines for conducting laboratory and practical classes in special epizootology for students of the 3rd-4th years of the Faculty of Veterinary Medicine. Kharkiv: KhDZVA, 2023. 17 p.

EVALUATION SYSTEM

System		points	ACTIVITY TO BE EVALUATED
Summative assessment (differentiated test, exam)	100 point ECTS (standard)	to 100	40% - final testing 60% - student's current work during the semester
Section evaluation	100 points total	to 30	answers to test questions
		to 30	result of mastering the independent work block
		to 40	student actuvuty in classes oral answers

NORMS OF ACADEMIC ETHICS AND CHARITY

All participants in the educational process (including those seeking education) must adhere to the code of academic integrity and the requirements prescribed in the provision "On academic integrity of participants in the educational process of DBTU": show discipline, education, respect each other's dignity, show kindness, honesty, responsibility.