

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY**

**Epizootiology and Parasitology Department
Faculty of Veterinary Medicine**

MODULE SYLLABUS

Antiepidemiological measures in the livestock

Протиепізоотичні заходи у тваринництві

(optional)

Implemented in the “Veterinary Medicine” Academic Program

Area of specialization 211 “ Veterinary Medicine”

second (master's) level of higher education

Sumy-2024

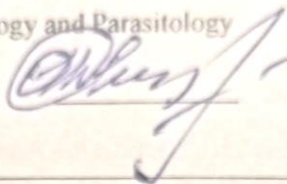
Author: _____

(Halyna REBENKO, Phd, Associate professor of Epizootiology and Parasitology Department)

Module syllabus agreed at the epizootology Department meeting

Minutes No 11 dated 06 2024

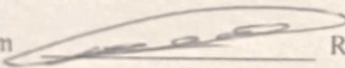
Head of Epizootiology and Parasitology Department



(Oksana KASIANENKO)

Approved by:

Guarantor of the Academic program



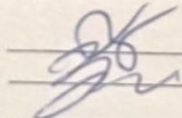
Roman PETROV

Dean of the Faculty

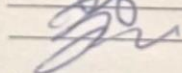


Oleksandr NECHYPORENKO

Syllabus review (attached) is provided by :

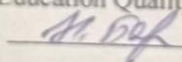


(O. Lukomara)



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Representative of the Department of Education Quality assurance, licensing and accreditation



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Registered in electronic data base

25.06.

2024

1. MODULE OVERVIEW

1.	Title	Anti epizootic measures in the livestock			
2.	Faculty/Department	Epizootiology and Parasitology			
3.	Type (compulsory or optional)	optional			
4.	Program(s) to which module is attached	211 "Veterinary Medicine"			
6.	Level of the National Qualifications Framework	7-th			
7.	Semester and duration of module	11			
8.	ECTS credits number	3 ECTS (90 hours)			
9.	Total workload and time allotment	Directed study			Self-directed study
		Lectures	Practicals	Labs	
		4	-	8	78
10	Language of instruction	English			
11	Module leader	Halyna Rebenko, Phd, Associate professor			
12.	Module leader contact information	rebenkogi@ukr.net +380958895465			
13.	Module description	Module leads to understanding of the contagious animal diseases features and developing of skills in making decisions on rational measures for the surveillance, control, prevention, management and eradication of contagious animal diseases.			
14.	Module aim	The aim of curriculum “Anti epizootic measures in the livestock” is to form a system of special theoretical knowledge about the objective laws of the processes of the emergence, development, spread and extinction of infectious animal diseases and to give the concept of the reliable diagnostic techniques and effective control procedures for it.			
15.	Module Dependencies (prerequisites, co-requisites, incompatible modules)	The educational component is based on the following: Veterinary microbiology and immunology, Veterinary virology, Veterinary hygiene and sanitation, Pathological physiology, Pathological anatomy, Clinical diagnosis of animal diseases, Veterinary pharmacology, Biotechnology of veterinary immunobiological drugs, Organization and economics of veterinary affairs, Epizootology and infectious animal diseases, Parasitology and			

		invasive animal diseases.
1 6.	The policy of academic integrity	<p>All tasks related to calculations, planning and accounting documentation will have individual initial data.</p> <p>For violation of academic integrity, students may be held subject to the following academic liability: <i>Academic plagiarism</i> - grade 0, re-completion of the task. <i>Academic fraud</i> (copying, deception, publishing someone's work for their own) - cancellation of points; re-assessment evaluation re-execution of non-independently performed work with new source data; <i>The use of electronic devices</i> during the final control of knowledge - removal from work, grade 0, re-passing the final control.</p>
1 7	Link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=1622

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

MLOs: On successful completion of the module the learner will be able to:	PLOs							How assessed
	PLO	PLO ¹	PLO ²	PLO ³	PLO ⁴	PLO ⁵	PLO ¹⁰	
MLO 1. To recognize the risks of infection or invasion for protection of the population from contagious animal diseases (including zoonoses)		+		+	+			Case studies and situation analysis
MLO 2. To use of tools, special devices, laboratory equipment, software and other technical means for monitoring, diagnostic tests, preventive vaccinations, other necessary manipulations during professional activities		+		+			+	Group tasks with self- and mutual assessment.
MLO 3. To use information from local and foreign sources to develop diagnostic, preventive and treatment strategies for communicable diseases; to find up-to-date information in accordance with international and national standards to ensure the epizootic welfare of livestock and avoid the danger of biological waste	+			+			+	Project evaluation Analysis of scientific articles in a given topics
MLO 4. To make plans, organize and carry out measures aimed at preventing the introduction and spread of infectious / invading pathogens, the management of animals suffering from infectious diseases, and the elimination of epizootic foci	+		+		+			Simulation exercises Development of plans for disease-control measures
MLO 5. To evaluate professionally the effectiveness of control and eliminational measures			+		+			Case studies
MLO 6. To demonstrate advanced problem-solving skills and effective communication with people who are interested in human and animal health					+	+		Participation in focus groups, simulation exercises

MODULE INDICATIVE CONTENT

Topics	Distribution of hours			Sel f- dir ect ed stu dy	Learning resources
	Directed study				
	Le c	P r	Labs		
10 semester					
Lecture 1: Biosecurity to prevent the introduction of the pathogens into the herds. Plan: 1. Epidemiological surveillance 2. Prevent the introduction of the pathogens into the herds 3. Controlled of animals flows 4. Biosecurity rules	2		2 - Making a project for prevention the introduction of the pathogens into the herds	4	Health Code (2017) (http://www.oie.int/standard-setting/terrestrial-code/)
Lecture 2: Laboratory diagnosis as entrance control 1. Taking samples 2. Serological tests 3. Microbiological tests 4. Helminthological and parasitological investigations 5. Feed examinations	2		2 - Making an order for taking, packing, delivering and investigating of samples accordingly to the individual task	4	Terrestrial Animal Health Code (2017) (http://www.oie.int/standard-setting/terrestrial-code/) Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2018 (http://www.oie.int/standard-setting/terrestrial-manual/access-online/)
Lecture 3: Vaccination to increase herd immunity and provide maternal protection for the newborns Plan: 1. Herd immunity 2. Active immunological methods (vaccination) 3. Vaccination programme 4. Strategy of immunization	2		Making a list of permitted vaccines against the diseases by task and build the vaccination program.	4	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2018 (http://www.oie.int/standard-setting/terrestrial-manual/access-online/)

Lecture 4: Disease prevention Plan: 1. Measures against the introduction of diseases 2. Epizootiological protection of country territory 3. Active creation of animal population 4. General preventive measures in animal population	2	2	-	4	MSD Veterinary Manual (https://www.msdtvetmanual.com/generalized-conditions)
Lecture 5: Disease control Plan: 1. Investigation of epizootiological situation 2. Epizootiological strategy and measures 3. Animal population specific health recovery	2	2	-	4	
Lecture 6: Emerging and Re-emerging Diseases of Animals Plan: 1. OIE-listed diseases, 2. Zoonotic diseases with serious public health implications, 3. other important diseases either impacting or with the potential to impact the major animal species 4. Application of risk analysis	2	2	-	4	AHP Disease Manual http://rd.spc.int/ext/Disease_Manual_Final https://en.wikivet.net/Learning_Resources
Lecture 7: Disease eradication programs Plan: 1. Prioritization in national emergency disease eradication programmes 2. Zoning 3. Methods of animal disease eradication	2	2	-	4	

4. Measures against zoonotic diseases			2 - Final lesson	4	
5. Strategies for dealing with special circumstances					
6. The endgame-verified freedom from infection					
Total	14		16	30	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Learning methods (self-directed study)
MLO 1. To recognize the risks of infection or invasion for protection of the population from contagious animal diseases (including zoonoses)	Explanation of possible situations with the risk of infecting people from infected animals. Consideration of cases with emphasis on precautionary measures and measures to eliminate zoonoses.	To study the main zoonoses: signs of their presence in animals, ways of human infection and transmission factors, as well as measures to prevent or eliminate the disease in case of occurrence.
MLO 2. To use of tools, special devices, laboratory equipment, software and other technical means for monitoring, diagnostic tests, preventive vaccinations, other necessary manipulations during professional activities	Demonstration of available equipment and devices, as well as videos of their use during diagnostic, preventive, veterinary and sanitary works Demonstration of capabilities for working with software for geographic information monitoring systems	Learn the types of tools, devices, equipment, their purpose and features of application
MLO 3. To use information from local and foreign sources to develop diagnostic, preventive and treatment strategies for communicable diseases; to find up-to-date information in accordance with international and national standards to ensure the epizootic welfare of livestock and avoid the danger of biological waste	Familiarization with the main official sources of information on communicable animal and poultry diseases, especially those that require a rapid response as they are extremely dangerous and notifiable	To practice the skills of obtaining up-to-date information on infectious diseases and the current epizootic situation, performing tasks
MLO 4. To make plans, organize and carry out measures aimed at preventing the introduction and spread of	Explain the purpose and principles of anti-epizootic measures. Consideration and analysis of items of action	Using the instructions on measures to combat specific infectious diseases (according to

infectious / invading pathogens, the management of animals suffering from infectious diseases, and the elimination of epizootic foci	plans for the prevention of major communicable diseases and plans for the elimination of diseases (health measures)	the tasks and according to the subject of training) to develop action plans to eliminate the outbreak (or recovery of livestock)
MLO 5. To evaluate professionally the effectiveness of control and eliminational measures	Explanation of the principles of determining the effectiveness of measures and possible ways to improve it	Analyze the provided action plans and the current epizootic situation, make judgments about the effectiveness of certain measures and propose changes, justifying their feasibility.
MLO 6. To demonstrate advanced problem-solving skills and effective communication with people who are interested in human and animal health	Conducting focus groups and simulation exercises	Find in the relevant instructions on disease control measures a list of prohibitions and restrictions, as well as a list of measures regulated for a particular case

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

No	Summative assessment methods	Grades	Deadline
11 semester			
1	Assessment of the ability to plan the location and arrangement of veterinary passages, barriers, isolators for infected animals or other objects of protection of the farm from the introduction of infectious agents	10/10%	By the end of the 2 weeks
2	Assessment of the ability to sample for laboratory tests, compile an	10/10%	By the end of the 5th week

	accompanying document and describe the methods of confirming diagnosis		
3	Testing the ability to navigate the range of vaccines, medicines, disinfectants, rodenticides and insecticides when choosing products for control, treating and disinsection. Debate	10/10%	By the end of the 15th week
4	Development of the plan of control or eradication measures against infectious disease and make the project	20/20%	By the end of the 11th week
5	Computer testing (multiple choice) in Moodle	10/10%	By the end of the 15th week
7	Performing the tasks in Google spreadsheets	10/10%	By the end of the 15th week
	Exam	30/30%	
	Total in semester	100/100%	

5.2.2. Grading criteria

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent
Assessment of the ability to plan the location and arrangement of veterinary passages, barriers, isolators for infected animals or other objects of protection of the farm from the introduction of infectious agents	0-2 The requirements are not oriented	3 Requirements are not met all or with errors	4 Requirements are taken into account, the plan of arrangement and arrangement is substantiated	5 Requirements are considered, the plan of arrangement and arrangement is grounded
Assessment of the ability to sample for laboratory tests, compile an accompanying document and describe the methods of confirming diagnosis	0-2 Does not guided in the procedure.	3 The sequence of the procedure is followed with gross errors	4 The procedure is quite correctly performed on the object. Documents and descriptions are not fully filled	5 The procedure is explained in detail and correctly performed on a living object. Documents and descriptions are full

Development of the plan of control or eradication measures against infectious disease and make the project	0-4	5-7	8-9	10
	Task requirements not met	Most requirements are met, but some components are missing or insufficiently met	All task requirements are met	Task requirements are met, while creativity and thoughtfulness are demonstrated
Testing the ability to navigate the range of vaccines, medicines, disinfectants, rodenticides and insecticides when choosing products for control, treating and disinsection. Debate	0-2	3	4	5
	Task requirements not met	Most requirements are met, but some components are missing or insufficiently met	All task requirements are met	Task requirements are met, while creativity and thoughtfulness are demonstrated

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.

No	Formative Assessment elements	Date
Autumn semester		
1.	Feedback aimed at supporting the student in understanding the correctness of the documentation	Each time you check the completed acts and accompanying
2.	Self-check for knowledge of the sequence of actions when performing procedures (diagnostic, preventive, veterinary and sanitary) based on the results of the analysis of performed blitz tasks	Blitz control at the beginning of 2,3,4,7,8,10, 14 and 15 classes (in the 6th semester)
	Evaluation of the activity and effectiveness of applicants' participation in focus groups and role-playing in simulation exercises. Comments and tips.	Each time in the form of focus groups or simulation exercises
	Feedback with comments and recommendations on how to solve problems	11th week
	Oral review and correction of plans of control or eradication measures against infectious disease (by options)	According to the schedule by topics

Self-assessment can be used both an element of formative and summative assessment.

6. LEARNING RESOURCES

6.1. Key resources

1. D.U. Pfeiffer Veterinary Epidemiology - An Introduction, 2002
2. Veterinary epidemiology- 3rd ed. Michael Thrusfield, 2007
3. Václav Kouba Epizootiology: Principles and Methods, 2008
4. Veterinary infection prevention and control. (2012) Linda Caveney, Barbara Jones, with Kimberly Ellis.
5. Veterinary Medicine: A textbook of the diseases of cattle, horses, sheep, pigs and goats - two-volume set, 11th (2017) Peter D. and Kenneth W
6. Veterinary Clinical Epidemiology- 3rd ed. Ronald D. Smith., 2005
7. Aurora Villarroel Practical clinical epidemiology for the veterinarian, 2015
8. Veterinary microbiology and microbial disease – 2nd ed. P.J. Quinn, B.K. Markey, F.C. Leonard, E.S. FitzPatrick, S. Fanning, P.J. Hartigan, 2011
9. Barbara E. Straw ... [et al.]. Diseases of swine — 9th ed, 2006
10. Infectious diseases of dogs and cats – 4-th ed, edited by Creig E.Green, 2013
11. Veterinary Vaccines and Diagnostics (Volume 41) Ronald D. Schultz, 1999
12. B. Austin, D. A. Austin Bacterial Fish Pathogens. Diseases of Farmed and Wild Fish– 4th Edition, 2007

6.2. Guidelines

6.3. Additional resources

MSD Veterinary Manual (<https://www.msdvetmanual.com/generalized-conditions>)

Terrestrial Animal Health Code (2017) (<http://www.oie.int/standard-setting/terrestrial-code/>)

Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2018
(<http://www.oie.int/standard-setting/terrestrial-manual/access-online/>)

AHP Disease Manual http://lrd.spc.int/ext/Disease_Manual_Final
https://en.wikivet.net/Learning_Resources

6.4. Computer Applications and soft

<https://five.epicollect.net/project/asfld/data>

https://www.goconqr.com/p/987892-veterinary-epidemiology-final-exam--bacteria-flash_card_decks

<https://kahoot.it/>