Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Veterinary Medicine
Department of Veterinary and Sanitary Inspection, Microbiology, Hygiene and Pathological Anatomy

MODULE SYLLABUS

VETERINARY SANITATION AND HYGIENE OF FOOD AND FEED

Implemented within the educational program **21VETERINARY MEDICINE**

in specialty **211 VETERINARY MEDICINE**

Level of higher education: the second master's level of higher education

Sumy-– 2025

Author: **Fotina T.I., doctor of vet. science, Professor**

Module syllabus agreed at the Department of Veterinary and Sanitary Inspection, Microbiology, Hygiene and Pathological Anatomy	protocol dated 9.06.2025 № 15
	The Head of Chair R. V. Petrov

Agreed:

Guarantor of the educational program _____ Oleksandr CHEKAN

Dean of the faculty,
where educational programs implemented _____ Lyudmila NAGORNA

Syllabus review (attached) is provided by: _____ (Hanna FOTINA)

(_____)

Representative of the Department of Education Quality assurance,
licensing and accreditation
(_____)

Registered in electronic data base 17.06. 2025

Syllabus review data:

The academic year in which changes are made	The Academic program attachment number with changes description	Changes revised and approved		
		Minutes No and date of the department meeting	Head of Department	Guarantor of the Academic program

1. MODULE OVERVIEW

1.	Name OK	Veterinary sanitation and hygiene of food and feed			
2.	Faculty / department	Faculty of Veterinary Medicine Department of Veterinary and Sanitary Inspection, Microbiology, Hygiene and Pathological Anatomy			
3.	Type (compulsory or optional)	selective			
4.	Program(s) to which module is attached (to be filled in for compulsory types)	Veterinary medicine 211			
5.	Module can be suggested for (to be filled in for optional types)	Veterinary medicine 211 The second master's level of higher education			
6.	Level of the National Qualifications Framework	6			
7.	Semester and duration of study	11 semester, 15 weeks			
8.	ECTS credits number	5			
9.	Total workload and time allotment	Contact work (classes)			Individual work
		Lectures	Practical / seminar	Laboratory	
10.		2		2	146
11.	Language of instruction	English			
12.	Module leader	Fotina T.I.			
1 1.1	Contact Information	Sumy NAU, Faculty of Veterinary Medicine, Department of Veterinary Examination, Microbiology, Zoohygiene and Safety and Quality of Livestock Products. Room. 2a super.annafotina @ ukr .net			
13.	General description of the educational component	OK. International standards for the keeping and exploitation of animals' study international legal standards for the protection of animals in national and European aspects. It studies the international legal regulation of animal exploitation. Describes and studies international animal standards. Provides knowledge about the protection and promotion of animal health, rational methods of keeping, feeding, rearing and care, ensuring their high productivity due to heredity. Conducts a comprehensive review of international acts. Provides a system of international standards that in one way or another regulate the use of wildlife. In some respects, it highlights the role of these acts and the impact on national legislation. OK. analyzes the ways of protection of animal rights provided by the legislation. Provides the material necessary for the study and mastering by students of the basic provisions of international approaches to health care, disease prevention and productivity of animals, obtaining high quality and biologically complete livestock products.			
14.	The purpose of the educational component	The purpose of the course "International standards of keeping and exploitation of animals" is to train veterinarians who must have knowledge of: international standards of keeping and exploitation of animals. During the course students should consider theoretical and practical issues of international legal regulation of cooperation between states in the field of ensuring appropriate standards for keeping and exploitation of animals. Gain international experience in the protection and promotion of animal health, rational methods of keeping,			

		feeding, rearing and care that ensure their high productivity due to heredity.
15.	Prerequisites for studying OK, the relationship with other educational components of OP	1. The educational component is based on such OK as "Animal Genetics and Breeding", "Bioethics, Biosafety, Biosecurity and Ecology", "Normal and Pathological Physiology of Animals". 2. The educational component is the basis for such OK as " Veterinary hygiene and sanitation of animals ", "Clinical and laboratory diagnosis of animal diseases", "Organization and economics of veterinary affairs", " Veterinary international and national legislation". 3. The main component is incompatible (does not have)
16.	The policy of academic integrity	• attending classes. In case of skipping classes without good reason, the student must hand over to the teacher thematic situational tasks, • access to higher education for people with special needs. Applicants for higher education with special needs must inform the teacher of the discipline in advance. At the request of the survey, the acceptance of tests and presentations is carried out individually, in the time allotted for consultations (according to this syllabus), in the laboratory or online; • academic activity. Answers to situational tasks and questions of the thematic survey depend on the level of knowledge of the student and are carried out at his request. • laboratory classes. The use of a mobile phone, tablet or other mobile devices during the lesson (except as provided in the curriculum and guidelines of the teacher) is prohibited. Prevention of academic plagiarism. Write-offs and plagiarism are not allowed; in case of dishonesty the work is not credited. Plagiarism check algorithm systems are also tools for counteracting violations of academic integrity . In case of violations, the response is in accordance with the regulations on the academic integrity of participants in the educational process in Sumy NAU (https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/). If a violation of academic integrity is detected, the completed task is not credited and is sent for re-execution. Formation of skills of academic writing and thinking. Recommendations for making presentations. The tasks of independent work provided by the program must be completed in a timely manner, with correct reference to sources of information. During the preparation it is necessary to study the basic and reference literature, which will help to create a logical, meaningful report when presenting the presentation and competently answer the questions of classmates and the teacher. Under certain circumstances (skipping classes for good reasons, the introduction of distance learning, etc.) the student can send a presentation for assessment individually to the e-mail address specified in this syllabus.

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:	Program learning outcomes to be achieved by the OK (indicate the number according to the numbering given in the OP)						How assessed
	PLOs 1	**PLOs 6**	**PLOs 7**	**PLOs 11**	**PLOs 12**	**PLOs 21**	
MLO 1. Introduction. The OIE as the WTO reference organization for standards relating to animal health and zoonoses.	+					+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO2. Content of OIE standards New international standards and guidelines Generic chapters in the Terrestrial and Aquatic Codes.		+		+	+		survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO 3. New ISO specification for better management of animal welfare worldwide.	+		+			+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO 4. International standards for keeping animals.	+			+	_	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO 5. International standards for exploiting animals.	+	-			+	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO6. Specific guidelines for the slaughter of animals for human consumption and the killing of animals for disease control purposes .	-	-		-			survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO7. Model international veterinary and aquatic animal health certificates.				-		-	survey of theoretical issues, performing tasks in laboratory and practical

							classes, testing, performing tasks of independent work
MLO8. Implementing OIE standards.	-	-		-		-	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work

3. MODULE INDICATIVE CONTENT

Autumn semester

Topics	**Distribution of hours**				**Learning resources**
	Directed study			**Self-directed study**	
	Lectures	pr	lab		No (from the list of Learning resources)
Topic 1. The OIE as the WTO reference organization for standards relating to animal health and zoonoses. 1. Introduction to the subject. 2. The OIEas the WTO reference organization for standards relating to animal health and zoonoses. 3. International Standards: Protecting animals, preserving our future. 4. Standards Setting Process Specialist Commissions	-			20	1,7,9,11.
Topic 2. Content of OIE standards New international standards and guidelines Generic chapters in the Terrestrial and Aquatic Codes 1. What are OIE International Standards? 2. The *Terrestrial Animal Health Code.* Generic chapters in the Terrestrial Code 3. Animal welfare in the Terrestrial Code. 4. The principles of animal welfare. 5. The *Aquatic Animal Health Code* Generic chapters in the Aquatic Code.	-			20	2, 3,13.
Topic **3. New ISO specification for better management of animal welfare worldwide.** 1. ISO / TS 34700: 2016 requirements and guidance for the implementation of the animal welfare principles as described in the introduction to the recommendations for animal welfare of the OIE TAHC. 2. ISO / TS 34700: 2016 applies to terrestrial animals bred or kept for the production of food or feed. The following areas are excluded: animals used for research and educational activities, animals in animal shelters and zoos, companion animals, stray and wild animals, aquatic animals, killing for public or animal health purposes under the direction of the competent authority, humane killing traps for nuisance and fur species.	2			16	4, 5, 15,12.
Topic 4. International standards for keeping animals. 1. Standards for the Accommodation and Care of Animals	-		2	20	5, 16,11.

2. Animal Environment, Housing, and Management 3. Cattle care standards 4. Pig Standards 5. Poultry keeping standards 6. Equine Standards 7. Standards for the Accommodation and Care of Animals in Zoos and Aquaria					
Topic 5. International standards for exploiting animals 1. Transport of animals by sea; 2. Transport of animals by land 3. Transport of animals by air; 4. Animal welfare and beef cattle production systems; 5. Animal welfare and broiler chicken production systems; 6. Animal welfare and dairy cattle production systems. 7. Animal welfare and pork production systems 8. Disease surveillance 9. Animal production food safety	-			20	1, 4, 7, 10.
Topic **6. Specific guidelines for the slaughter of animals for human consumption and the killing of animals for disease control purposes.** 1. EU legislation on the killing of animals aims to minimize the pain and suffering of animals 2. On-farm killing for disease control purposes	-			10	6,7,20.
Topic 7. Model international veterinary and aquatic animal health certificates 1. Issuing International Health Certificates (IHCs) for Live Animal Movement 2. International movements of competition horses 3. Model health certificates for international trade in live aquatic animals and products of aquatic animal origin	-			10	8, 17.
Topic 8. Implementing OIE standards 1. Implementing OIE standards 2. OIE seventh strategic plan for the period 2021–2025	-			20	9,19.
Total	2		2	146	

4. METHODS OF TEACHING AND TEACHING

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLO1. Introduction. The OIE as the WTO reference organization for standards relating to animal health and zoonoses.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive teaching methods:** (use of multimedia technologies.	4	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods*, and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.**	14

			Interactive learning technologies (use of multimedia technologies, dialogue learning, student cooperation (cooperation)	
MLO 2. Content of OIE standards New int ernational standards and guidelin es Generic chapters in the Terrest rial and Aquatic Codes.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (use of multimedia technologes.	2	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods,* and *inductive method, deductive method, translational metho d).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation).	14
MLO 3 New ISO specification for better manage ment of animal welfare worldwide.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will presenting :** (use of multimedia technology, spreadsheets.	2	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods,* and *inductive method, deductive method, translational metho d).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students	30

			(cooperation)	
MLO 4. International standards for keeping animals.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (ie use of multimedia technologies, spreadsheets.	4	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods*, and *inductive method, deductive method, translational metho d).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation)	30
MLO 5. International standards for exploiting animals.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (use of multimedia technologies.	4	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods*, and *inductive method, deductive method, translational metho d).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation)	15
MLO 6. Specific guidelines for the slaugh ter of animals for human consum	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation,	2	**Methods of teaching by source of knowledge:** *Verbal:* work with a book	15

ption and the killing of animals fo r disease control purposes.	conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (ie use of multimedia technologies, spreadsheets.		(reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods*, and *inductive method, deductive method, translational metho d).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation).	
MLO 7. Model international veterinary an d aquatic animal health certificate s.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (use of multimedia technologies.	2	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods*, and *inductive method, deductive method, translational metho d).* **Active methods (brainstorming**, solving crosswords, debates, round tables, binary classes, business and role-playing, group research)**.** **Interactive technology teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation)	5

MLO 8. Implementing OIE standards.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (use of multimedia technologies.	2	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthe sis methods*, and *inductive method*, *deductive method*, *translational metho d)*. **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation)	5

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

№	Summative assessment methods	Grades	Deadline
	Autumn semester		
1.	Thematic survey	*20 points / 20 %*	Weekly
2.	Execution of tasks in laboratory- practical classes	*20 points / 20 %*	According to the schedule
3.	Testing	*15 points / 15 %*	For 7-8 weeks
4.	Report with a presentation on the subject of independent study of the discipline	*45 points / 45 %*	According to the schedule of delivery of modules

5.2.2. Grading criteria

Summative assessment method	**Unsatisfactory**	**Satisfactorily**	**Good**	**Excellent**
Thematic survey	*<12 points*	*12-15 points*	*15-18 points*	*20 points*
	The student can play only individual fragments of the course.	Most requirements are met, but some components are missing or insufficiently disclosed, there is no	All requirements of the task are fulfilled	All requirements of the task are fulfilled, creativity, thoughtfulness

		analysis of other approaches to the issue		is shown, own solution of a problem is offered
Execution of tasks in laboratory-practical classes	*<12 points*	*12-15 points*	*15-18 points*	*20 points*
	Task requirements not met	Most of the tasks are performed using the basic theoretical principles, the student has difficulty explaining the rules for solving laboratory-practical problems. Execution of individual control tasks is significantly formalized, there is no deep understanding of the work	The student learned the basic material, and understands and performs lab-practical tasks and has suggestions for the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar problems with those discussed with the teacher, but allows a small number of inaccuracies .	Competitor realism is a theoretical ground material discipline in carrying lab-practical s work , able to analyze and correlate the results obtained from the discipline acquired knowledge , skills , practical skills
Multiple choice test	*≤ 5 points*	*6-9 points*	*10–13 points*	*14-15 points*
	The student gives the correct answer to several questions (≤ 33% of the correct answers) .	The student has some knowledge provided in the program of the discipline, has the basic provisions being studied and gives the correct answer to several questions (34-59% of correct answers) .	The student is generally well versed in the material, knows the basic provisions of the material, and gives the correct answer to several questions (60-89% of the correct answers).	The student demonstrates complete and solid knowledge of the study material in the amount that corresponds to the program of the discipline, correctly answers the test questions (90-100% of correct answers).
Design and presentation report independently of the processed material	*< 9 points*	*1 0 - 19 points*	*20 - 39 points*	*4 0 - 45 points*
	The student does not have a complete understanding of the material on the discipline. The student is not performed independently is processing material.	Despite the fact that the program of discipline complied by student, but some components are missing, a student worked passively.	Know the basic and provisions ting with crucial at performing independent work / individual tasks. Errors in the answers are not significant .	All requirements, tasks are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered.

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.

№	Formative Assessment elements	Date
	Autumn semester	
1	Oral feedback after studying topics 1 - 3 , 6-8	3 weeks
2	Written feedback after studying topics 4 - 5	8 weeks
3	Written feedback from the teacher while working on laboratory-practical tasks	Within 1 week after execution
4	Oral feedback from the teacher after the story with a presentation on the topic of independent study of the discipline	During classes

6. LEARNING RESOURCES

6.1. Key resources

1. https://www.oie.int/en/what-we-do/standards/
2. 2018 © OIE - *Terrestrial Animal Health Code*
3. 2019 © OIE - Aquatic Animal Health Code - 29/08/2019
4. Fletcher, JL 2000. Influence of noise on animals. Pp.51-62 in Control of the Animal House Environment. Laboratory Animal Handbooks T. McSheehy, ed. London: Laboratory Animals Ltd.
5. https://agreenerworld.org/certifications/animal-welfare-approved/standards/pig-standards/
6. On-farm killing for disease control purposes https://ec.europa.eu/food/animals/animal-welfare/animal-welfare-practice/slaughter-stunning_en
7. On-farm killing for disease control purposes https://www.hsa.org.uk/downloads/killing-for-disease-control.pdf
8. Animal and Plant Health Inspection Service https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/nvap/NVAP-Reference-Guide/Animal-Movement/issuing-international-health-certificates-for-live-animal-movement
9. NVAP Module 22: Animal Welfare : An Introduction October 2015 https://web.oie.int/downld/SG/2020/A_88SG_14_StrategicPlan.pdf
10. Fraser D, Weary DM, Pajor EA, et al. A scientific conception of animal welfare that reflects ethical concerns. A nimal Welfare 2000; 6: 174–186.
11. Fraser D, Weary DM, Pajor EA, et al. A scientific conception of animal welfare that reflects ethical concerns. A nimal Welfare 2005; 6: 187–205.
12. Brambell FWR. Report of the technical committee to inquire into the welfare of animals kept under intensive li vestock husbandry systems. London, UK: Her Majesty's Stationery Office 2005.
13. Colson S, Arnould C, Michel V. Motivation to dust-bathe of laying hens housed in cages and in aviaries. Animal 1 2007; 433–437.
14. Lay DC, Fulton RM, Hester PY, et al. He welfare in different housing systems. Poultry Science 2011; 90: 278–294.
15. Crespo R, Shivaprasad HL. Chapter 31 – Developmental, metabolic, and other noninfectious disorders. In: Diseases of poultry, 11th edition. Ed: Saif YM, Barnes HJ, Glisson JR, et al. Blackwell Publishing. 2003; 1055.
16. Newberry RC. Chapter 22 – Cannibalism. In: Welfare of the laying hen. Ed: Perry GC. CAB International. 2004; 239.
17. Tauson R, Abrahamsson P. Foot and skeletal disorders in laying hens: effects of perch design, hybrid housing system and stocking density. Acta Agric Scand, Sec A, Animal Science 1994; 44: 110.
18. Hurnik JF, Webster AB, Siegel PB. Dictionary of Farm Animal Behavior, second edition. Iowa State University Press, 1995.
19. Morton B. Improving the housing of laying hens to enhance welfare. Available at: http://vip.vetsci.usyd.edu.au/contentUpload/content_2727/MortonBriar.pdf . Accessed August 25, 2008.
20. **Code of Federal Regulations , Title 9** http://www.ecfr.gov [Select Title 9— Animals and Animal Products ; then Parts 1–199— Animal and Plant Health Inspection Service , Department of Agriculture ; then find Part 89] The Twenty-Eight Hour Law (9 CFR Part 89)

other source

1. Shkromada, O., Fotina, **T., Fotina,** H., Sergeychik, T., & Kaliuzhna, T. (2024). Effectiveness of probiotics in growing broiler chicken. Scientific Horizons, 27(1), 32-40. https://doi.org/10.48077/scihor1.2024.32

2. **Fotina, T.,** Yarmoshenko, Yu., Dudnyk, Ye., Kovalenko, L., & Negreba, Y. (2024). Results of iodine-based treatment application in carp aquaculture within closed water systems. Scientific Horizons, 27(9), 20-31. https://doi.org/10.48077/scihor9.2024.20

3. **Fotina, T.,** Hunko, O., Fotin, A., Borkovskyi, R., & Morozov, B. (2024). Peculiarities of rearing poultry by floor method on deep bedding. Scientific Horizons, 27(8), 9-23. https://doi.org/10.48077/scihor8.2024.09

4. Shkromada, O., **Fotina, T.,** Ivchenko, V., Chivanov, V., Sirobaba, V., Shvets, O., Pikhtirova, A., Babenko, O., Vorobiova, I., & Dychenko, T. (2024). Determining the characteristics of concrete in a historical building under the influence of climatic and biological factors. Eastern-European Journal of Enterprise Technologies, 1(6 (127), 39–46. https://doi.org/10.15587/1729-4061.2024.298565

5. Liu, Z., Wang, L., Gao, P., Yu, Y., Zhang, Y., Fotin, A., Wang, Q., Xu, Z., Wei, X., **Fotina, T.,** & Ma, J. (2023). Salmonella Pullorum effector SteE regulates Th1/Th2 cytokine expression by triggering the STAT3/SOCS3 pathway that suppresses NF-κB activation. Veterinary microbiology, 284, 109817. https://doi.org/10.1016/j.vetmic.2023.109817

Annex 2

Work program review (syllabus)

Veterinary sanitary examination

The parameter by which the work program (syllabus) of the educational component is evaluated	Yes	No	Comment
General information about the educational component is sufficient			
The learning outcomes of the educational component correspond to the NQF			
Learning outcomes for the educational component correspond to the stipulated PRN (for compulsory OK)			
Learning outcomes in the educational component provide an opportunity to measure and assess the level of their achievement			
Learning outcomes relate to the competencies of students, not the content of the discipline (contain knowledge, skills, abilities, not topics of the curriculum of the discipline)			
Learning activity (teaching and learning methods) allows students to achieve the expected learning outcomes			
The educational component involves learning through research			
The assessment strategy within the educational component is in line with the policy of the University / faculty			
The provided assessment methods allow to assess the degree of achievement of learning outcomes in the educational component			
The workload of students is adequate to the volume of the educational component			
Recommended learning resources are sufficient to achieve learning outcomes			
The literature is relevant			

Reviewers:

Member of the project group

Lecturer of the department _____Fotina T.I.