MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY
Faculty of Veterinary Medicine
Department of Therapy, Pharmacology, Clinical Diagnostics and Chemistry

MODULE SYLLABUS

Veterinary prevention technology non-contagious animal diseases

(compulsory)

Implemented in the "Veterinary Medicine" Academic Program

Area of specialization 211 " Veterinary Medicine"

at the second (master 's) level of higher education

Sumy-2022

Author: _____ O.V. Musiienko candidate of veterinary sciences, associate professor

Considered, approved and approved at the meeting of the department	protocol from 08.06.2021. № 15
Therapy, pharmacology, clinical diagnosis and chemistry	The head Department _____ Ph.D., Professor Ulko LG

Agreed:

Guarantor of the Academic program _____ (L. Ulko)

Dean of the Faculty _____(O. Nechyporenko)

Review of the work program provided: _____

_____

Methodist of the Department of Education Quality, licensing and accreditation _____ (N. Banasik)

Registered in the electronic database: date: 05.08.2021

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Syllabus review data:

Academic year in which changes are made	The number of the appendix to the work program with a description of the changes	The changes have been reviewed and approved		
		Date and number of the minutes of the meeting of the department	Head of Department	Guarantor of the educational program

1. MODULE OVERVIEW

1.	Name OK	Veterinary prevention technology non-contagious animal diseases			
2.	Faculty / department	Veterinary Medicine / Therapy, Pharmacology, Clinical Diagnostics and Chemistry			
3.	Status OK	compulsory			
4.	Program / Specialty (programs), the component of which is OK for (to be filled in for mandatory OK)	Veterinary medicine / 211 «Veterinary medicine»			
5.	OK can be suggested for (to be filled in for selective OK)	-			
6.	Semester and duration of study	3 semester, 15 weeks			
7.	Number of ECTS credits	5			
8.	The total number of hours and their distribution	Contact work (classes)			Individual work
		Lectures	Practical / seminar	Laboratory	
9.	5- Semester	14		26	50
10.	Language of instruction	English			
11.	Teacher / Coordinator of the educational component	O.V. Musiienko candidate of veterinary sciences, associate professor			
11.1	Contact Information	aleksey_musya@ukr.net 0507388690			
12.	General description of the educational component	The educational component is related to the general objectives of the OP and covers aspects of the formation of a modern specialist veterinarian in-depth theoretical knowledge on the study of welfare and science of animal welfare and behavior			
13.	The purpose of the educational component	Training of highly qualified specialists who are able to solve complex problems in the conditions of production related to deviations in animal behavior as a result of diseases and assessment of animal welfare in order to timely identify and eliminate violations in order to prevent diseases and obtain quality livestock products.			
14.	Prerequisites for studying OK, the relationship with other educational components of OP	1. The educational component is based on OK 8 Basics of breeding and feeding animals OK 14 Animal physiology OK 20 Veterinary hygiene and sanitation OK 26 Clinical diagnosis of animal diseases 2. The educational component is the basis for OK 31 General and special surgery OK 28 Obstetrics, gynecology and biotechnology of animal reproduction OK 32 Epizootology and infectious diseases OK 33 Internal diseases of the creature OK 37 Organization of veterinary affairs and national and international veterinary legislation			

15.	The policy of academic integrity	No manifestations of academic dishonesty are allowed during the study of OK. Systems are tools for counteracting violations of academic integrityPlagiarism check algorithm. 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.
16.	Course link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=2288

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**
	PLOs 1	PLOs 2	PLOs 3	PLOs 4	PLOs 7	
MLOs 1. Understand the role veterinary science and practice in the prevention of internal diseases of animals.Analyze the features of prevention of internal diseases of animals. Understand onfeatures of clinical examination of sick animals. To carry out medical examination of farm animals: to analyze production indicators, conditions of keeping and feeding, to determine clinical status, to analyze quality of forages, to carry out laboratory researches. Use the acquired knowledge for further therapeutic activities.	+		+			– defense of an animal behavior research project – survey on theoretical issues – test control – performing tasks on independent work
MLOs 2. Understand on indicators of complete feeding, namely: dry matter content in the diet, concentration of nutrients and biologically active substances. Organize rational feeding of animals taking into account the species, age, breed, physiological condition, industrial use of animals, type of diet. Determine composition of feeds that can contain a significant amount of different chemical structure of substances. Know the importance of biologically active substances that can accumulate in some feeds in toxic concentrations.		+		+	+	– problem solving – demonstrative performance of research tasks. – survey on theoretical issues – test control – performing tasks of independent work
MLOs 3. Analyze microclimate in livestock facilities,influence on the condition of animals of light, ventilation, indoor air temperature, humidity,	+	+			+	– survey on theoretical issues – final control – computer testing – solving situational

gassiness, saturation with microflora.To inspect the implementation of animal training (cleaning and trimming of hooves, sawing horns, vaccination, etc.) and to develop measures to control insects, to prevent helminthic, hemosporidiosis and other animal diseases. Apply chemical and microbiological synthesis to balance diets. Know the compounds that inhibit the processes of digestion and use of feed nutrients, inactivate certain vitamins or increase the need for them.						problems – performing tasks on independent work
MLOs 4. Know the theoretical foundations and practical aspects of medical examination of ruminants, horses and pigs, principles of sample population and continuity,, a system of planned diagnostic, preventive and curative measures aimed at creating highly productive herds of animals.Analyze production indicators. Develop systems of measures to ensure a high level of non-specific resistance, milk production and maintaining the health of sows. Carry out medical examination of young animals in the maternity ward and during rearing and fattening. INto master the method of calculation and analysis of medical examination indicators, to draw conclusions and develop recommendations for improving the organization, quality and efficiency of medical examination	+		+		+	– survey on theoretical issues – presentation and defense of a practical task – test control – solving situational problems – performing tasks on independent work

3. MODULE INDICATIVE CONTENT

Topics	Distribution of hours				Learning resources
	Classroom work			Individual work	
	Luke	P.z / semin. with	Lab. with.		
Topic 1. **Acquaintance with the general prevention of internal diseases of animals** General prevention of internal diseases of animals. Medical examination: analysis of animal feeding, mode and hygiene of feeding, analysis of feed quality. Energy supply and ways to improve it. Calculation of exchange energy.	2		2	6	[1, 3, 7, 8, 10, 13]
Topic 2.**Analysis of animal feeding, mode and hygiene of feeding, analysis of feed and water quality.** Study of the effects of substances that destroy nutrients and biologically active substances.Consideration of poisoning of pigs fed fish and meat and bone meal with increased amount of histamine.	2		4	6	[1, 2, 4, 5, 8, 15]
Topic 3.**Study of technologies for keeping animals and methods of disease prevention during the grazing period.** Study of the botanical composition of pastures in order to clean from poisonous grasses, metal and other objects, if necessary, arrange a place to protect animals from the sun, wind and rain, equip a source of water.	2		4	14	[1, 3, 5, 8, 9, 14]
Topic 4. **Application of means of chemical and microbiological synthesis.** Study of means of chemical and microbiological synthesis in order to balance diets, eliminate the lack of nitrogenous substances, macro- and microelements, vitamins, prevention of alimentary and endocrine diseases.	2		4	6	[3, 5, 6, 7, 10, 18]
Topic 5. **Features of medical examination of ruminants.** Clinical examination of cows and			4	6	[1, 4, 7, 8, 10, 16]

heifers, as well as calves at different stages of fattening. Determination of the clinical status of cows and heifers.					
Topic 6. **Features of medical examination of horses and pigs.** Study of the clinical status of livestock of different sex and age groups of horses and clinical study of stallions, mares and other high-value animals.	2		4	6	[2, 3, 6, 9,10, 17]
Topic 7. **Features of medical examination of young animals in the maternity ward and during rearing and fattening.** Development of a system of measures to ensure a high level of non-specific resistance, milk production and maintaining the health of young animals. Development of recommendations for improving the organization, quality and efficiency of medical examination	2		4	6	[1, 3, 5, 8, 9, 13]
Total	14		26	50	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLOs 1.	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 means of training and problem situations, classes on production, group researches in the conditions of "Educational production complex-vivarium", use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets, case-study (method of analysis of	8	Methods of teaching by source of knowledge: *Verbal*: work with the book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observations. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method). Active methods (brainstorming, binary classes, group research). Interactive learning technologies (use of multimedia technologies, dialogic learning, cooperation of students (cooperation). Self-study, analysis, preparation of multimedia reports	24

	specific situations), dialogue training, student cooperation (cooperation)			
MLOs 2.	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 means of training and problem situations, classes on production, group researches in the conditions of "Educational production complex-vivarium", use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets, case-study (method of analysis of specific situations), dialogue training, student cooperation (cooperation)	12	Methods of teaching by source of knowledge: *Verbal*: work with the book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observations. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method). Active methods (brainstorming, binary classes, group research). Interactive learning technologies (use of multimedia technologies, dialogic learning, cooperation of students (cooperation). Self-study, analysis, preparation of multimedia reports	26
MLOs 3.	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 means of training and problem situations, classes on production, group researches in the conditions of "Educational production complex-vivarium", use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets, case-study (method of analysis of specific situations),	12	Methods of teaching by source of knowledge: *Verbal*: work with the book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observations. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method). Active methods (brainstorming, binary classes, group research). Interactive learning technologies (use of multimedia technologies, dialogic learning, cooperation of students (cooperation). Self-study, analysis, preparation of multimedia reports	28

	dialogue training, student cooperation (cooperation)			
MLOs 4.	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 means of training and problem situations, classes on production, group researches in interfaculty NNL of electron microscopy, use of educational and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets, case-study (method of analysis of specific situations), dialogue training, student cooperation (cooperation)	12	Methods of teaching by source of knowledge: *Verbal*: work with the book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observations. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method). Active methods (brainstorming, binary classes, group research). Interactive learning technologies (use of multimedia technologies, dialogic learning, cooperation of students (cooperation). Self-study, analysis, preparation of multimedia reports	28

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

№	Summative assessment methods	Grades	Deadline
1.	Current control: Thematic survey Execution of tasks in laboratory-practical classes	20 points / 40%	4 weeks
2.	Protection of the project on the study of animal behavior, problem solving. demonstrative performance of research tasks, solving situational problems, presentation and defense of a practical task	20 points / 30%	13 weeks
3.	Periodic control, computer testing	15 points / 15%	8 weeks
4.	Execution of tasks on independent work	15 points / 15%	According to the schedule of delivery of modules
5.	Exam	30 points / 30%	according to the schedule

5.2.2. Grading criteria

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent

Current control: thematic survey performing tasks in laboratory-practical classes	**<20 points**	**21-30 points**	**31-39 points**	**40 points**
	Task requirements not met.	Most of the requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue. Partially reproduced knowledge on the basis of directly presented material within the program.	Most of the requirements are met, but some components are missing. Reproduced knowledge of directly presented material within the program with some evidence of a broader study.	All the requirements of the task are fulfilled, creativity and thoughtfulness are demonstrated, the own solution of the problem is offered. Reproduced knowledge obtained outside the directly presented material within the program.
Protection of the project on the study of animal behavior, problem solving. demonstrative performance of research tasks, solving situational problems, presentation and defense of a practical task	**<11 points**	**12-20 points**	**26-29 points**	**30 points**
	Task requirements not met	Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	Most of the requirements are met, but some components are missing	All requirements of the task are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered
Periodic control, multiple choice tests. Execution of tasks on independent work	**<3 points**	**4-10 points**	**11-14 points**	**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).

5.1. Formative assessment:

To assess current progress in learning and understanding areas for further improvement

№	Formative Assessment elements	Date
1.	Oral feedback after studying topics 1-3, 4-7	3 weeks
2.	Written feedback on topics 1-3	Within 1 week after assembly
3.	Testing after studying topics 4-7	7 weeks
4.	Intermediate control	According to the schedule
5.	Current control (testing, generalization of points) 15 weeks	15 weeks
6.	Written feedback from the teacher after checking the synopsis with independent study of the discipline.	Within 1 week after performance

6. LEARNING RESOURCES

6.1. Key resources

1 Levchenko VI, Vlizlo VV , Kondrakhin IP etc. Veterinary clinical biochemistry .; for order. VI Levchenko and VL Галяса. Bila Tserkva, 2002. 400 p.
2 Sudakov MO, Tsvilikhovsky MI, Bereza VI etc. Internal non-communicable diseases of animals .; for order. M.O. Sudakova. K .: Meta, 2002. 352 s.
3 Levchenko VI, Kondrakhin IP, Vlizlo VV etc. Internal diseases of animals .; for order. VI Levchenko. Bila Tserkva, 2001. Part 2. 544 c.
4 Levchenko VI, Kondrakhin IP, Sudakov MO etc. Internal diseases of animals .; for order. VI Levchenko. Bila Tserkva, 1999. Part 1. 376 c.
5 Verbytsky PI, Dostoevsky PP Handbook of veterinary medicine. K .: "Harvest", 2004. 1280 p.
6 Sudakov MO, Bereza VI, Pogursky IG etc. Microelementosis of farm animals; for order. M.O. Sudakova. [2nd ed.]. K .: Urozhay, 2001. 144 s.
7 Modern reference book of veterinary medicine. Under the general editorship V.G. Gavrisha and V.A. Sidorkina. Izd-e 8-e dop. Rostov n / D: Phoenix, 2007. 608 p.
8 Tsvilikhovsky MI etc. Internal diseases of animals: Workshop. K .: Aristei, 2005. 148 p.

6.2. 6.3. Additional resources:

9. Musienko OV, Musienko VM, Ulko LG, Kisterna OS Methodical manual "Veterinary technologies for the prevention of non-communicable animal diseases". Course of lectures. Sumy: RVV SNAU, 2015. 56 p.
10. Musienko OV, Musienko VM, Ulko LG, Kisterna OS Methodical manual "Veterinary technologies for the prevention of non-communicable animal diseases". Sumy: RVV SNAU, 2015. 52 p.
11. Ulko LG, Musienko VM, Sklyar OI, Musienko OV, Kisterna OS Methodical instructions for the implementation of the program of training and industrial practice. Sumy: RVV SNAU, 2002. 70 p.
12. Ulko LG, Musienko VM, Musienko OV, Kisterna OS Rules of personal hygiene and occupational safety in the study of sick animals and providing them with medical care. Sumy: RVV SNAU, 2005. 17 p.
13. Ulko LG, Musienko VM, Musienko OV, Kisterna OS Methodical manual for health care and independent work. "Medical examination of agricultural animals ». Sumy: RVV SNAU, 2006. 72 p.
14. http: //www.vetmed.wsu.edu
15. E-learning course: Veterinary Toxicology (http://vetmed.nauu.kiev.ua/course/view.php?id=41)
16. Medical Library, section "Veterinary Pharmacology and Toxicology"http://www.twirpx.com/files/medicine/veterinary/fharmacy/
17. Medical library, section "Veterinary medicine"http://www.booksmed.com/veterinariya/2459-veterinarnaya-toksikologiya-s-osnovami-ekologii-argunov-uchebnik.html
18. Scientific and educational portal: Veterinary pharmacology and toxicologyhttp://originweb.info/science/codes/16/160004.html.

6.3. Computer Applications and soft

1. MOODL platforms; "ZOOM"; "Viber"; Facebook.

Додаток

Рецензія на Робочу програму (силабус)

Параметр, за яким оцінюється робоча програма (силабус) освітнього компонента гарантом або членом проєктної групи	**Так**	**Ні**	**Коментар**
Результати навчання за освітнім компонентом (ДРН) відповідають НРК	+		
Результати навчання за освітнім компонентом (ДРН) відповідають передбаченим ПРН (для обов'язкових ОК)	+		
Результати навчання за освітнім компонентом дають можливість виміряти та оцінити рівень їх досягнення	+		

Член проектної групи ОП _____ _____

Параметр, за яким оцінюється робоча програма (силабус) освітнього компонента викладачем відповідної кафедри	**Так**	**Ні**	**Коментар**
Загальна інформація про освітній компонент є достатньою	+		
Результати навчання за освітнім компонентом (ДРН) відповідають НРК	+		
Результати навчання за освітнім компонентом (ДРН) дають можливість виміряти та оцінити рівень їх досягнення	+		
Результати навчання (ДРН) стосуються компетентностей студентів, а не змісту дисципліни (містять знання, уміння, навички, а не теми навчальної програми дисципліни)	+		
Зміст ОК сформовано відповідно до структурно-логічної схеми	+		
Навчальна активність (методи викладання та навчання) дає змогу студентам досягти очікуваних результатів навчання (ДРН)	+		
Освітній компонент передбачає навчання через дослідження, що є доцільним та достатнім для відповідного рівня вищої освіти	+		
Стратегія оцінювання в межах освітнього компонента відповідає політиці Університету/факультету	+		
Передбачені методи оцінювання дозволяють оцінити ступінь досягнення результатів навчання за освітнім компонентом	+		
Навантаження студентів є адекватним обсягу освітнього компонента	+		
Рекомендовані навчальні ресурси є достатніми для досягнення результатів навчання (ДРН)	+		
Література є актуальною	+		

Рецензент (викладач кафедри) _____ _____ _____

(назва) (посада, ПІБ) (підпис)