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

Working program (syllabus) of the educational component

Veterinary Hygiene and Sanitation of Animal Husbandry Compulsory

Specialty	211 "Veterinary Medicine"
Educational program	"Veterinary Medicine"
Level of higher education	second (master's)

eveloper: ________ Liudmyla NAHORNA, doctor of veterinary science, professor departments of veterinary and sanitary inspection, microbiology, hygiene and pathological anatomy

Considered, approved and approved at the meeting of the department of	protocol dated June), 2025 No. 16				
veterinary and sanitary inspection, microbiology, hygiene and pathological anatomy	Head department	(signature)	Roman PETROV (surname, initials)			
Agreed:	M		,			
Guarantor of the education	nal program	Oleksandr CHEKAN				
Dean of the faculty where	the educational progr	am is implemented				

Review of the work program (attached) provided by:

Oksana SHKROMADA

Svitlana NAZARENKO

Methodist of the Education Quality Department, licensing and accreditation 4. Bapa (Aagre Bapaux)

Registered in the electronic database: date: ______26, OB, __2025

Liudmyla NAHORNA

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Information on revision of the work program (syllabus):

The academic	The number of the	The changes	ved	
year in which the changes are made	annex to the work program with a description of the changes	Date and number of the protocol of the meeting of the department	Head of Department	Guarantor of the educational program

GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

1.	The name is OK	Veterinary hygiene and sanitation animal husbandry								
2.	Faculty/department	Faculty of Ve	eterinary	Medicine / Departm	nent of veterinary	and				
		sanitary inspe	ection, mi	icrobiology, hygien	e and pathologica	al anatomy				
3.	The status is OK	Mandatory co	mponent	t						
4.	Program/Specialty	EPP "Veterina	ry Medici	ne"						
	(programs), the	211 Veterinary	medicine	2						
	component of which is									
	OK for (to be filled in									
	for mandatory OK)									
5.	OK can be offered for									
	(to be <i>filled in for</i>									
6.	selective OK) NRK level	7-th level								
7.	Semester and duration	4-th semester,	15 waake							
/.	of study	4-til selliestel,	13 weeks							
8.	Number of ECTS	5.0								
0.	credits	3.0								
9.	The total number of		Co	ntact work (class)		Individual				
	hours and their	Lectures	Pr/sem	Laboratory	Educational	work				
	distribution	practice								
		4		4	20	112				
10.	Language of education	English	-	4	30	112				
11.	Teacher/Coordinator	d.vet.s., profes	cor Nahor	na I. V						
11.	of the educational	d.vet.s., profes	soi ivanoi	ma L. V.						
	component									
11.	Contact Information	Phone: +8(050) 628 66 8	35;						
		lvn_10@ukr.ne	et							
12.	General description of	The education	al compo	nent is related to the	general objective	es of the OP				
	the educational	^	•	of the parameters						
	component			ck premises, the an	-					
		_		combat animal disean sanitary and hygical	_					
				andards and rules of l						
			. •	types of productive		•				
		of researching	environm	ental objects.						
13.	The purpose of the	To form amo	ng the at	oplicants an underst	anding of the the	oretical and				
10.	educational component		-	influence of normal	-					
	,	factors on the	animal b	ody, zoohygiene sta	ndards and rules	for keeping,				
		_	-	and cultivation of diff		_				
		_		ethods of researching						
		_	_	servation of health a	_	oauctivity to				
14.	Prerequisites for		obtain high-quality and safe animal husbandry products The educational component is based on the study of EC:							
	studying OK,		_	netics and animal bree	•					
	connection with other					OV				
	educational	The educationa	ai compon	ent is the basis for st	uaying the following	ng UKs:				

	components of OP	Internal Animal Diseases, Parasitology and Invasive Animal Diseases,
		Epizootology and Infectious Diseases, Veterinary Toxicology
15.	Policy of academic integrity	Any manifestations of academic dishonesty are not allowed during the study of OK. If a violation of academic integrity is detected (writing off, academic plagiarism, use of gadgets while completing final tasks), completed tasks are canceled and not counted, the winner is directed to repeat the set of tasks. In case of violations, the response takes place in accordance with the regulatory documentation regarding the academic integrity of the participants of the educational process at the Sumy National University (

2. RESULTS TEACHING BY EDUCATIONAL COMPONENT AND THEIR COMMUNICATION WITHSOFTWARE LEARNING RESULTS

COMMUNICATION WITHSUFTWARE LEARNING RESULTS								
The results teaching by OK:		•	learning			How the LOD is evaluated		
After study educational	wh	ich is ai	med at a	chieving	g EC			
componentstudent is expected will	(spe	ecify the	number	accordi	ing to			
be able to"	n	umberir	ıg, given	in profi	iles			
			EP)					
		Ī	3	T				
		7	0	7	_			
	03	0	0 1	0.1	1.0			
	PLO	P PLO 7	PLO 10	PLO 12	PLO 17			
		I						
LOD 1. Determine indicators of microclimate parameters in production premises for keeping productive animals: (temperature,			h	h		Rating control according to the 100-point rating scale of the ECTS. Examination of theoretical questions, assessment of the level		
gas composition of air, humidity, bacterial air pollution, speed of its						of knowledge demonstrated in laboratory-practical classes;		
movement, lighting of premises, etc.). Interpret the received data,						independent processing of individual issues of independent		
propose a set of measures to maintain the parameters of the						work by applicants of higher education, with the presentation		
microclimate of industrial						of the processed material in the		
premises.						form of a presentation report. The activity of applicants is taken into		
						account during the discussion of		
						the issues brought to class; express control (oral survey)		
						during classroom classes.		
						Analysis of practical skills in		
						using devices for determining microclimate parameters.		
LOD 2. To determine with the	X	X	X	X		Rating control according to the		
help of devices and special						100-point rating scale of the		
laboratory studies the physical,						ECTS. Examination of theoretical		
chemical, and biological						questions, assessment of the level		
properties of soil, water, and						of knowledge demonstrated in		
fodder. Interpret the obtained results, compare them with						laboratory-practical classes; independent processing of		
sanitary and hygienic standards						independent processing of individual issues of independent		
and develop measures (action						work of higher education		
1	<u> </u>		l	L	I	J		

in the future. In the future In the futur	algorithm) to eliminate and prevent the identified deficiencies						applicants, with presentation of the processed material in the form
LOD 3. Develop measures aimed at improving the sanitary and hygienic violations. LOD 3. Develop measures aimed at improving the sanitary and hygienic violations. LOD 3. Develop measures aimed at improving the sanitary and hygienic violations. LOD 4. Conduct analysis and x valuation of farm projects, equipment; control: the quality of construction, care of animals, operation of equipment; develop the necessary measures to eliminate hygienic violations. LOD 5. Conduct a sanitary and hygienic evaluation of the grocessed material in the form of a presentation report. The activity of the students is taken into account during the discussion of the issues brought to class; express control (oral survey) during classroom classes. Solving fituational tasks. LOD 4. Conduct analysis and x x x x Rating control according to the 100-point rating scale of the 100-point ratin	in the future .						activity of the students is taken into account during the discussion of the issues brought to the class;
LOD 3. Develop measures aimed at improving the sanitary and hygienic conditions of keeping productive animals and poultry. X							during classroom classes. Analysis of practical skills in the use of devices and laboratory methods. Solving situational
at improving the sanitary and hygienic conditions of keeping productive animals and poultry. The productive animals and poultry	LOD 3 Develop measures aimed		v		v	Y	
LOD 4. Conduct analysis and x x x x Rating control according to the evaluation of farm projects, equipment; control: the quality of construction, care of animals, compliance with hygienic requirements for keeping animals, operation of equipment; develop the necessary measures to eliminate hygienic violations. A	at improving the sanitary and hygienic conditions of keeping		A		A	A	100-point rating scale of the ECTS. Examination of theoretical questions, assessment of the level of knowledge demonstrated in laboratory-practical classes; independent processing of individual issues of independent work by applicants of higher education, with the presentation of the processed material in the form of a presentation report. The activity of applicants is taken into account during the discussion of the issues brought to class;
LOD 4. Conduct analysis and variation of farm projects, equipment; control: the quality of construction, care of animals, compliance with hygienic requirements for keeping animals, operation of equipment; develop the necessary measures to eliminate hygienic violations. Variation Variation							during classroom classes. Solving
hygienic evaluation of the technology of keeping various types of productive animals; develop schemes for eliminating to the technology of keeping various types of productive animals; develop schemes for eliminating to the technology of keeping various types of productive animals; develop schemes for eliminating to the technology of keeping various types of productive animals; develop schemes for eliminating to the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of productive animals; develop schemes for eliminating the technology of keeping various types of the technology of ke	evaluation of farm projects, equipment; control: the quality of construction, care of animals, compliance with hygienic requirements for keeping animals, operation of equipment; develop the necessary measures to eliminate hygienic violations.	X		X		X	Rating control according to the 100-point rating scale of the ECTS. Examination of theoretical questions, assessment of the level of knowledge demonstrated in laboratory-practical classes; independent processing of individual issues of independent work of higher education applicants, with presentation of the processed material in the form of a presentation report. The activity of the students is taken into account during the discussion of the issues brought to the class; express control (oral survey) during classroom classes. Analysis of practical skills in the use of devices and laboratory methods. Solving situational tasks.
types of productive animals; develop schemes for eliminating questions, assessment of the level of knowledge demonstrated in	hygienic evaluation of the				X	X	100-point rating scale of the
technological and hygienic	types of productive animals;						questions, assessment of the level

deficiencies.				independent processing of individual issues of independent work by applicants of higher education, with the presentation of the processed material in the form of a presentation report. The activity of the students is taken into account during the discussion of the issues brought to the class; express control (oral survey) during classroom classes. Solving situational tasks.
LOD 6. To evaluate the well-being and well-being of productive animals under different technologies of their cultivation.	X		X	Rating control according to the 100-point rating scale of the ECTS. Examination of theoretical questions, assessment of the level of knowledge demonstrated in laboratory-practical classes; independent processing of individual issues of independent work of higher education applicants, with presentation of the processed material in the form of a presentation report. The activity of the students is taken into account during the discussion of the issues brought to the class; express control (oral survey) during classroom classes. Solving situational tasks.

3. CONTENT OF THE EDUCATIONAL COMPONENT (CURRICULUM PROGRAM)

Topic.	Distri	bution with	in the ger	neral time budget	Recommended
List of issues to be considered within	A	uditory wo	ork	Independent work	Books ¹
the topic					
	Lk	P.z /	Lab.		
		semin.	with.		
		with			
Topic 1. Hygienic value of physical	-		2	10	[1, 4, 5, 6, 7, 8,
properties of air (Hygienic value of					11, 18]
temperature, heat exchange of animal					
bodies, hypothermia. Air humidity, its					
hygienic value, hygrometric indicators.					
Air movement, its hygienic value,					
atmospheric pressure, solar radiation					
and its components. Ultraviolet and					
infrared rays and their hygienic value.					
Devices for measuring air temperature,					
enclosing structures. Methods for					
measuring air temperature, enclosing					
structures. Measurement of indoor air					
temperature. Measuring the temperature					
of the enclosing structures of the					
premises. Devices for determining air					
humidity, their structure, rules of					
operation. Measurement of air humidity					

 $^{^{\}rm 1}\,\mathrm{A}$ specific source from the main or additional recommended literature

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in the indoor and outdoor environment.				
Calculations of air humidity indicators.				
Hygrometric indicators, their definitions				
and calculations. Methods of				
determining the wind rose. Wind rose				
calculations. Determination of				
illumination, devices, measurement of				
natural and artificial illumination.				
Methods of determination of dust and				
bacterial air pollution. The concept of				
"dead zone", aerorumbogram, their				
practical application under intensive				
technologies of animal husbandry.				
Topic 2. Hygienic value of gas	_		10	[1, 2, 4, 5, 6, 7, 8,
composition of air. Gas composition of	_	_	10	
atmospheric air and air of livestock				11, 18, 28, 38]
_				
premises. The main toxic gases: carbon				
dioxide, hydrogen sulfide, ammonia,				
methane. Their GDC. Weather, climate,				
microclimate. Acclimatization and				
adaptation of animals. Protection of the				
external environment. Methods of				
determination of CO ₂ , NH ₃ , H ₂ S in				
air. Familiarization with titrometric				
methods of determination of harmful				
gases. Determination of CO _{2.,} NH _{3,} H ₂				
S, familiarization with other methods.	2		10	[1245670
Topic 3. Sanitary and hygienic	2	-	10	[1, 2, 4, 5, 6, 7, 8,
significance of soils, their				9, 18, 26, 28, 38]
improvement, self-cleaning,				
disinfection. Hygienic significance of				
mechanical composition and physical				
properties of soils. Biological properties				
of soils. Biogeochemical enzootics and				
their prevention. Soil improvement				
(self-cleaning, disinfection). A system				
of measures to protect soils from				
contamination by livestock waste.				
•				
Determination of the mechanical				
composition of soils. Determination of				
physical properties of soils.				
Determination of the presence of				
organic substances in soils.				
Determination of nitrates in soils.				
Determination of chlorides in soils.				
Determination of soil homogeneity.				
	ĺ			
Determination of hacterial and		i l		1
Determination of bacterial and helminthological contamination of soils				
Determination of bacterial and helminthological contamination of soils.				
	2	-	10	[1, 2, 4, 5, 6, 7, 8,
helminthological contamination of soils.	2	-	10	
helminthological contamination of soils. Topic 4. Hygienic requirements for	2	-	10	12, 13, 14, 18, 21-
helminthological contamination of soils. Topic 4. Hygienic requirements for water, water supply, animal watering,	2	-	10	
helminthological contamination of soils. Topic 4. Hygienic requirements for water, water supply, animal watering, its sanitary assessment. Hygienic	2	-	10	12, 13, 14, 18, 21-
helminthological contamination of soils. Topic 4. Hygienic requirements for water, water supply, animal watering, its sanitary assessment. Hygienic requirements for fodder and animal	2	-	10	12, 13, 14, 18, 21-
helminthological contamination of soils. Topic 4. Hygienic requirements for water, water supply, animal watering, its sanitary assessment. Hygienic requirements for fodder and animal feeding, prevention of fodder	2	-	10	12, 13, 14, 18, 21-

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supply and watering of animals.				
Methods of drinking water and				
wastewater treatment. Rules of sanitary				
and topographic survey of water				
sources. Devices and rules for sampling				
water from different water sources.				
Acquaintance with devices, methods of				
water research. Determination of				
physical properties of water: smell,				
transparency, turbidity, color, etc. Familiarization with the method of				
determining the chemical properties of				
water. DST of water quality.				
Determination of carbonate, permanent				
and removable hardness of water.				
Acquaintance with water disinfection				
methods. Hygienic requirements for				
feeding animals. Prevention of fodder				
poisoning of animals. Sanitary and				
hygienic assessment of roughage.				
Sanitary and hygienic assessment of				
succulent fodder. Sanitary and hygienic				
evaluation of concentrated feeds.				
Topic 5. Animal hygiene	-	-	10	[1, 2, 4, 5, 6, 7, 8,
requirements for the design of				10, 18, 26, 28, 30-
livestock premises, building				381
materials. Zoohygienic requirements				
for ventilation, heating, sewage.				
Animal objects and their meaning.				
Sanitary and hygienic requirements for				
the planning and construction of				
livestock premises. Sanitary and				
hygienic control over the design and				
construction of livestock premises.				
Sanitary - hygienic requirements for				
equipment and microclimate. Sanitary				
and hygienic requirements for				
ventilation. Sanitary and hygienic				
requirements for heating. Sanitary and				
hygienic requirements for sewage.				
Layout plan of farms and premises for				
cattle. Layout plan of farms and				
premises for pigs. The layout of farms				
and premises for sheep and poultry				
farms. Sanitary and hygienic				
requirements for building materials.				
Sanitary and hygienic requirements for				
individual structures of premises:				
foundation, walls, ceilings, floors, etc.				
Natural and artificial ventilation,				
calculation. Space heating (heat				
balance) calculation. Types of sewers.				
			10	F 1 2 4 5 5 5 6
Topic 6. Sanitary and hygienic	-	-	10	[1, 2, 4, 5, 6, 7, 8,
requirements for the territory of				10, 18, 26, 28, 30-

livestock farms, equipment, premises. Animal care hygiene in the cold and warm period of the year. Sanitary and hygienic requirements for the territory of livestock farms. Arrangement of sanitary facilities of livestock farms. Systems of summer maintenance of various types of animals, hygienic				38]
requirements. Systems of keeping different types of animals in the cold period of the year, hygienic requirements.				
Topic 7. Hygiene of keeping cattle and pigs. Systems and hygiene of cattle keeping. Hygiene of growing young cattle. Pig housing systems. Hygienic requirements for keeping different age and technological groups of pigs. Types of buildings, equipment. Hygiene of maintenance and care of cattle in the stable and warm period of the year. Hygiene of growing young animals. Types of buildings, equipment in pig farming. Conditions for keeping and caring for different age groups of pigs.	-	-	10	[1, 2, 4, 5, 6, 7, 8, 11, 14, 17, 18, 28, 38, 39]
Topic 8. Hygiene of keeping sheep, horses, poultry and fur animals. Hygiene of keeping sheep. Hygiene of keeping horses. Poultry keeping hygiene. Hygiene of keeping fur animals. Sanitary and hygienic requirements for premises. Sanitary and hygienic requirements for the equipment of stables, poultry houses and farms for breeding fur animals. Hygiene of care for sheep, horses, poultry and fur animals. Sanitary and hygienic requirements for premises. Hygiene of care for sheep, horses, poultry and fur animals.	1	2	20	[1, 2, 4, 5, 6, 7, 8, 11, 14, 17, 18, 28, 38, 39]
Topic 9. Hygiene of pond fish farming. Systems and directions of fish farms. Peculiarities of conditions of keeping, feeding and veterinary and sanitary measures during fish farming. Water supply systems for fish ponds. Influence of physical and chemical factors on fish.	-	-	10	[1, 2, 4, 5, 6, 7, 8, 11, 14, 17, 18, 28, 38]

Salt mode of water. Features of maintenance in the winter period.					
Topic 10. Hygiene in beekeeping. Hygienic requirements for the location of the apiary. Production and auxiliary premises of the apiary. Types of beehives. Requirements for their structure. Optimum conditions for keeping bees. Microclimate of hives. Peculiarities of wintering bees. Wintering in special premises and in the yard. Storage conditions for fodder and honeycombs. Peculiarities of bee transportation. Veterinary and sanitary measures at the apiary	-		-	12	[1, 2, 4, 5, 6, 7, 8, 11, 14, 17, 18, 28, 38, 39]
Educational practice					
Study of the sanitary and hygienic condition of the soil, water, and air of livestock premises. Sanitary assessment. Research on the quality of fodder of plant origin: coarse, juicy, concentrated. Carrying out their sanitary assessment. Research of methods and methods of disinfection, disposal of manure and biological waste				30	
In total	4	_	4	142	

4. TEACHING AND LEARNING METHODS

DRN	Teaching methods (work to	Learning methods (what types of learning
Dia	be carried out by the teacher	activities should be performed by the student
	l •	<u> </u>
	during classroom classes,	independently)
	consultations)	
DRN 1. Determine	Narration of theoretical	Working with books, lecture notes, educational and
indicators of	questions, explanations,	methodical literature (reading, retelling, writing,
microclimate	conversation (heuristic and	note-taking).
parameters in	reproductive), multimedia	Acquaintance with information from official sites
production premises	lecture, instruction.	on the topic of the lesson or a separate issue
for keeping	Laboratory and practical	(modern methods of controlling microclimate
productive animals:	classes in the educational and	parameters in the conditions of industrial farms for
(temperature, gas	production laboratory "Vivariy	breeding productive animals).
composition of air,	SNAU". Demonstration of	Memorization of theoretical material, observation.
humidity, bacterial	methods for determining	The student must apply learning methods based on
air pollution, speed	microclimate parameters and	the nature of the logic of knowledge (analytical,
of its movement,	interpretation of the obtained	synthesis methods, inductive method, deductive
lighting of premises,	data, illustration, observation.	method).
etc.). Interpret the	Use of technical teaching aids,	On the basis of the studied and processed material,
received data,	broadcast of video files related	independently generate an opinion during a
propose a set of	to the topic of the lesson,	theoretical survey, solving situational tasks,
measures to	analysis of problem situations,	disputes, discussions).
maintain the	lessons at the factory, group	Use multimedia technologies to work on topics
parameters of the	studies, use of educational and	assigned for independent study, dialogic learning,
microclimate of	control tests).	student cooperation (cooperation).
	,	student cooperation (cooperation).

Use of multimedia technologies, application of the method of analysis of specific situations (case—study), dialogic learning, cooperation of students (cooperation). DRN 2. To determine with the help of devices and special laboratory and special laboratory and special laboratory studies the physical, chemical, and biological properties of soil, water, and fodder. Interpret the obtained results, compare them with sanitary and hygienic standards develop measures airmed at infunctional algorithm) to eliminate and learning			
method of analysis of specific situations (case—study), dialogic learning, cooperation of students (cooperation). DRN 2. To determine with the help of devices and special laboratory studies the physical. Ichemical, and biological properties of soil, water, and fodder. Interpret the obtained results, compare them with sanitary and hygienic standards and developmensaures (action algorithm) to eliminate and prevent the identified deficiencies in the future. DRN 3. Develop Associately and Consumer Protection), group research, use of educational production of kaeping at the workplace (Sum) Regional State Laboratory of the State Service of Ukraine on Food Salety and Consumer Protection), group research, use of educational and control tests, solving situations of the keeping productive, multimedia technologies, application of the method of laboratory (vivariy SNAU"). Use of technical teaching aids, and poultry. DRN 3. Develop Narration of theoretical questions, excursions to productive nimals and popultry. Morking with books, lecture notes, educational and methodical literature (reading, retelling, writing, note-taking). Acquaintance with the information of official sites on the topic of the lesson or a separate issue contintons of industrial farms for raising productive and interpretation of the contintons of industrial farms for raising productive and interpretation of the solidation of the nature of the logic of knowledge (analytical, synthesis methods, inductive method, deductive method. Service of Ukraine on Food Salety and Consumer Protection), group research, use of educational and control tests, solving situations (case-study), dialogic learning, cooperation of students (cooperation). DRN 3. Develop (the productive animals) and poultry. DRN 3. Develop (the productive animals) and poultry. DRN 3. Develop (the productive animals) and poultry and problems situations, excursions to production (within dual education), group studies, use of educational and control tests, consideration of the nature of the log	industrial premises.		
DRN 2. To determine with the help of devices and special laboratory studies the physical. chemical, and biological properties of soil, water, and fodder. Interpret the obtained results, compare them with sanitary and hygienic standards and develop measures a (actional and prothers). Use of technical addicticencies in the future. DRN 3. Develop measures aimed at improving the sanitary and prothers and control tests, solving situational problems tasks). Use of methodo of measures aimed at improving the sanitary and prothers of of keeping productive), multimedia technologies, application of the method of analysis of specific situations (case-study), dialogic learning, cooperation). DRN 3. Develop measures aimed at mygroric technical technologies, application of the method of analysis of specific situations (case-study), dialogic learning and poultry. DRN 3. Develop measures aimed at mygroric technical technologies, application of the method of on analysis of specific situations (case-study), dialogic learning, cooperation). DRN 3. Develop measures aimed at mygroric technical technologies, application of the method of analysis of specific situations (case-study), dialogic learning, cooperation of students (cooperation). DRN 3. Develop measures aimed at mygroric technical technologies, application of the method of analysis of specific situations (case-study), dialogic learning, cooperation of students (cooperation). DRN 3. Develop measures aimed at mygroric conditions of keeping productive animals and poultry. DRN 3. Develop measures aimed at mygroric conditions of the cellular production and poultry. DRN 3. Develop measures aimed at mygroric conditions of the cellular production and poultry. DRN 3. Develop measures aimed at mygroric conditions of the cellular production and poultry. DRN 3. Develop measures aimed at the mygroric productive production and poultry. DRN 3. Develop measures aimed at the mygroric productive production and poultry. DRN 3. Develop measures aimed at the mygroric productive produ		technologies, application of the	
dialogic learning, cooperation of students (cooperation). DRN 2. To determine with the help of devices and special laboratory studies the physical, chemical, and biological properties of soil, water, and fodder. Interpret the obtained results, compare them with sanitary and hygienic and deficiencies in the (deucational-production algorithm) to climinate and prevent the identifical deficiencies in the future. DRN 3. Develop and Easter Laboratory of the State Service of Ukraine on Food Safety and Consumer Protection), group research, use of educational and control tests, conversation of the exception of keeping broductive animals and poultry. DRN 3. Develop and Consumer Protection), Protection, group research, use of educational and control tests, conversation of the method of analysis of specific situations (case-study), dialogic learning, cooperation of the method of analysis of specific situations of keeping productive animals and poultry. DRN 3. Develop (Consumer Protection), group research, use of educational and control tests, solving situations of the method of analysis of specific situations (case-study), dialogic learning, cooperation of the method of analysis of specific situations (case-study), dialogic learning, cooperation of the method of analysis of specific situations and problems standary and poultry. DRN 3. Develop (Consumer Protection), group research, use of educational and control tests, solving situational problems tasks). Use of multimedia technologies, application of the method of sandy problem situations, coversation (heuristic and reproductive), multimedia technologies, application of the method of sandy problems situations, excursions to production (within dual education), group research, use of educational and control tests, consideration of situations and problem situations and problem situations of the control tests, consideration of the control tests, consideration of situations and problem situations and problem situations and problem situations and problem situations and prob		method of analysis of specific	
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	dialogic learning, cooperation	
DDN 4 C 1 4	of students (cooperation).	W/ 1' '/1 1 1 1 / 1 1 1 / 1 1 1
DRN 4. Conduct	Narration of theoretical questions, explanations,	Working with books, lecture notes, educational and
analysis and evaluation of farm	conversation (heuristic and	methodical literature (reading, retelling, writing, note-taking).
projects, equipment;	reproductive), multimedia	Acquaintance with the information of official sites
control: the quality	lecture, instruction.	on the subject of the lesson or a separate issue
of construction, care	Laboratory-practical classes in	(constructive features of livestock premises and
of animals,	(educational-production	modern equipment for various types of productive
compliance with	laboratory "Vivariy SNAU",).	animals).
hygienic	Use of technical teaching aids	Memorization of theoretical material, observation.
requirements for	and problem situations,	The student must apply learning methods based on
keeping animals,	excursions to production	the nature of the logic of knowledge (analytical,
operation of	(within dual education), group	synthesis methods, inductive method, deductive
equipment; develop	studies, use of educational and	method).
the necessary	control tests, consideration of	On the basis of the studied and processed material,
measures to	situational tasks).	independently generate an opinion during a
eliminate hygienic	Use of multimedia	theoretical survey, solving situational tasks,
violations.	technologies, application of the	disputes, discussions).
	method of analysis of specific	Use multimedia technologies to work on topics
	situations (case-study),	assigned for independent study, dialogic learning,
	dialogic learning, cooperation of students (cooperation).	student cooperation (cooperation).
DRN 5. Conduct a	Narration of theoretical	Working with books, lecture notes, educational and
sanitary and	questions, explanations,	methodical literature (reading, retelling, writing,
hygienic assessment	conversation (heuristic and	note-taking).
of the technology of	reproductive), multimedia	Acquaintance with the information of official sites
keeping various	lecture, instruction.	on the topic of the lesson or a separate issue
types of productive	Laboratory-practical classes in	(hygiene of keeping various types of productive
animals; develop	the educational and production	animals).
schemes for	laboratory "Vivariy of SNAU",	Memorization of theoretical material, observation.
eliminating	simulation classes on pig	The student must apply learning methods based on
technological and	breeding and milk production	the nature of the logic of knowledge (analytical,
hygienic	of SNAU.	synthesis methods, inductive method, deductive
deficiencies.	Use of technical teaching aids	method).
	and problem situations, field	On the basis of the studied and processed material,
	trips to production (as part of dual education), group studies,	independently generate an opinion during a
	use of educational and control	theoretical survey, solving situational tasks,
	tests , consideration of	disputes, discussions).
	situational tasks).	Use multimedia technologies to work on topics
	Use of multimedia	assigned for independent study, dialogic learning,
	technologies, application of the	student cooperation (cooperation).
	method of analysis of specific	
	situations (case-study),	
	dialogic learning, cooperation	
	of students (cooperation).	
DRN 6. To evaluate	Narration of theoretical	Working with books, lecture notes, educational and
the well-being and	questions, explanations,	methodical literature (reading, retelling, writing,
well-being of	conversation (heuristic and	note-taking).
productive animals	reproductive), multimedia	Acquaintance with the information of official sites
under different	lecture, instruction.	on the topic of the lesson or a separate issue
technologies of their	Laboratory-practical classes in	(hygiene of keeping various types of productive
cultivation.	the (educational-production	animals).
	laboratory "Vivariy SNAU"). Use of technical teaching aids	Memorization of theoretical material, observation. The student must apply learning methods based on
	and problem situations,	the nature of the logic of knowledge (analytical,
	and problem situations,	ine nature of the logic of knowledge (analytical,

excursions to production	synthesis methods, inductive method, deductive
(within dual education), group	method).
studies, use of educational and	On the basis of the studied and processed material,
control tests, consideration of	independently generate an opinion during a
situational tasks).	theoretical survey, solving situational tasks,
Use of multimedia	disputes, discussions).
technologies, application of the	Use multimedia technologies to work on topics
method of analysis of specific	assigned for independent study, dialogic learning,
situations (case-study),	student cooperation (cooperation).
dialogic learning, cooperation	
of students (cooperation).	

5. EVALUATION BY THE EDUCATIONAL COMPONENT

5.1. Diagnostic assessment

Testing for mastery of the terminology used in the study of OK. No assessment is given.

5.2. Summative assessment

5.2.1. To assess the expected learning outcomes, it is provided

No	Methods of summative assessment	Points / Weight in	Compilation date
		the overall	
		assessment	
1	Thematic oral survey	15points / 15%	During the study of OK
2	Performance of tasks in laboratory-practical classes	15points / 15%	According to the schedule
3	Multiple choice test in the Moodle system	15 points / 15%	During 7-8 weeks
4	A report with a presentation on the topic of independent study of the discipline	15 points / 15%	According to the schedule
5	Report and presentation report based on the results of educational practice	10 points / 10%	According to the schedule
6	Examination	30 points/30%	According to the schedule
	Together for the 4th semester	100 points/100%	

5.2.2. Evaluation criteria

Component ²	Unsatisfactoril	Satisfactorily	Fine	Perfectly ³
	y			
Thematic oral survey	<5 points	5 points	10 points	15 points
	The student can reproduce only individual fragments from the course.	Most of the requirements are met, but individual components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	All requirements of the task have been fulfilled	the requirements of the task were fulfilled, creativity, thoughtfulness was demonstrated, and an own solution to the problem was proposed
Performance of	<5 points	5 points	10 points	15 points

² Specify the summative assessment component

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³ Specify the distribution of points and the criteria determining the level of assessment

tasks in	Task	Most of the tasks are	The student has	The applicant
laboratory- practical classes	requirements not met	performed using basic theoretical principles, the student has difficulty explaining the rules for solving laboratory-practical tasks. The performance of individual control tasks is significantly formalized, there is no deep understanding of the work	mastered the basic material, and understands and performs laboratory-practical tasks, has suggestions regarding the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar tasks to those discussed with the teacher, but allows a small number of inaccuracies.	implements the theoretical material of the discipline while performing laboratory and practical work, is able to analyze and compare the results obtained on the basis of the knowledge, skills, and practical skills acquired from this discipline
Multiple choice	≤5 points	5 points	10 points	15 points
test in the Moodle system	The student gives the correct answer to several questions (≤ 33% of correct answers).	The student has certain knowledge provided for in the discipline program, possesses the main provisions being studied and gives the correct answer to several questions (34-59% of correct answers).	In general, the student has a good command of the material, knows the main provisions of the material, and gives the correct answer to several questions (60–89% of correct answers).	The student demonstrates complete and solid knowledge of the educational material in the amount corresponding to the discipline program, correctly answers the test questions (90–100% of correct answers).
A report with a	<5 points	5 points	10 points	15 points
presentation on the topic of independent study of the discipline	The student lacks complete understanding of the subject material. The student did not complete the independent processing of the material.	Despite the fact that the student completed the program of the academic discipline, but individual components were missing or insufficiently studied, the student worked passively.	Knows the main provisions that are of decisive importance in performing independent work / individual tasks. Errors in the answers are not significant.	All requirements and tasks were fulfilled, creativity and thoughtfulness were demonstrated, and an own solution to the problem was proposed.
Report and	<2 points	3 points	5 points	10 points

presentation	The student	Despite the fact that	Knows the main	All requirements
report based on	lacks complete	the student completed	provisions that are of	regarding the
the results of	understanding of	the educational	decisive importance	completion of
educational	the subject	practice program, but	in performance of	educational
practice	material. The	1	practice tasks. Errors	practice, tasks,
	student did not	were missing or	in the answers are	creativity and
	complete the	insufficiently worked	not significant.	thoughtfulness
	practice	out, the student		were
	program.	worked passively.		demonstrated, and
				an own solution
				was proposed

5.3. Formative assessment:

To assess the current progress in learning and understand the directions for further improvement is provided

No	Elements of formative assessment	Date
1	Verbal feedback after studying each topic	At every lesson
2	Verbal feedback from the teacher during the performance	At the end of the lesson
	of laboratory-practical tasks	
3	Verbal feedback from the teacher after listening to a report	After completing the practice
	based on the results of educational practice and testing	
	practical skills	
4	Verbal feedback from the teacher after the awardee's	During classes after the
	presentation on the topic of independent study of	winner's report
	individual topics of the OK	

6. EDUCATIONAL RESOURCES (LITERATURE)

Main sources

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