MODULE SYLLABUS

Comparative morphology, special pathomorphology and forensic veterinary medicine (compulsory/optional)
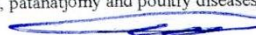
Implemented in the "Veterinary medicine " Academic Program

Area of specialization 211 " Veterinary medicine "

at the first (bachelor's) level of higher education

Sumy-2021

Author: _____ (senjor lecturer Y. Baidevliatova)
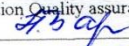
Module syllabus agreed at the Department meeting	Minutes No ____ dated July___ 2021
	Head of Virology, patanatjomy and poultry diseases Department _____ (R. Petrov)

Approved by:

Guarantor of the Academic program _____ (L. Ulko)

Dean of the Faculty _____ (O. Nechiporenko)

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

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

Registered in electronic data base ____15.09____ 2021

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.	Title	**Comparative morphology, special pathomorphology and forensic veterinary medicine**
2.	Faculty/Department	Veterinary medicine/Virology, Patanathomy, Poultry diseases
3.	Type (compulsory or optional)	Obligatory
4.	Program(s) to which module is attached (to be filled in for compulsory types)	211 – Veterinary medicine
5.	Module can be suggested for (to be filled in for optional types)	
6.	Level of the National Qualifications Framework	7
7.	Semester and duration of module	1, 15 weeks
8.	ECTS credits number	3
9.	Total workload and time allotment	Directed study / Self-directed study

		Directed study			Self-directed study
9.	Total workload and time allotment	Lectures	Practicals	Labs	
		16	**-**	**44**	**30**

10.	Language of instruction	English
11.	Module leader	PhD, senjor lecturer Y. Baidevliatova
12.	Module leader contact information	0992486681, juliyabayd@ukr.net, viber 0992486681
13.	Module description	Study of the main methods of determining osteometric parameters, species features of the structure of internal organs and organoleptic parameters by laboratory tests for species identification of animals and products obtained from them; mastering the morphological structure of muscles and their changes depending on the influence of various factors, mastering the basics of differential pathological diagnosis of animal diseases of various etiologies and their use in forensic veterinary practice, mastering the stages of forensic veterinary examination for trauma, poisoning and toxicosis, technological disorders , assessment of professional actions of the doctor.
14.	Module aim	Training of highly qualified specialists who are able to solve problems of comparative morphology, special pathomorphology and forensic veterinary medicine in the conditions of production.
15.	Module Dependencies (prerequisites, co-requisites, incompatible modules)	1. The educational component is based on the knowledge obtained in the study of normal anatomy, histology, cytology, embryology, normal and pathological physiology, pathological anatomy. 2. The educational component is the basis for the study of veterinary and sanitary examination and veterinary legislation, veterinary forensics.
16.	The policy of academic integrity	All tasks related to calculations, planning and accounting documentation will have individual initial data. Violation of academic integrity in the study of OK "Cytology, histology, embryology" will be considered: academic plagiarism,

		academic fraud (copying, deception, publishing someone's work for their own), the use of electronic devices during the final control of knowledge.
		For violation of academic integrity, students may be held subject to the following academic liability:
		Academic plagiarism - grade 0, re-completion of the task.
		Academic fraud - cancellation of points; re-assessment, re-execution of non-independently performed work with new source data;
		The use of electronic devices during the final control of knowledge - removal from work, grade 0, re-passing the final control.
17	Link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=4191

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
	PLO1	PLO2	PLO3	PLO4	PLO6	PLO7	PLO9	PLO10	
MLOs 1. apply components of procedural and organizational bases of forensic veterinary examination;						+			survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 2. identify animals by osteometric parameters and muscle structure;		+							survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 3. to identify animals by the structure of internal organs, organoleptic parameters and laboratory tests;		+							survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 4. to conduct SVE in court proceedings in industrial poultry, pigs, livestock;			+	+					survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 5. to carry out SVE at illness and death of animals owing to infringement of their conditions of feeding, maintenance and operation;			+						survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 6. determine the level of incorrect and incompetent actions of the doctor in clinical work, which could affect the quality of livestock products;					+				survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 7. apply knowledge of thanatology in the conduct of CVE.		+							survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 8. apply the components of training in the order of collection, selection of materials of different nature, which are physical evidence, their packaging, design and sending for research; forensic methods of research of samples (objects) of material evidence.							+		survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 9. apply CVE methods of live animals; mastering the methods of CEE in the selection and examination of samples of biological lenses: blood, skin, hair;	+	+							survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 10. apply methods of differential pathological diagnosis in organopathology of animals;						+			survey of theoretical issues, performance of tasks in laboratory-practical classes,

									testing, performance of tasks of independent work
MLOs 11.apply CVE methods for assessing the negative impact on animal health and welfare;		+						+	survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 12. apply CVE methods for poisoning and toxicosis of animals;					+				survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work
MLOs 13. apply CVE methods in forensic veterinary traumatology.					+				survey of theoretical issues, performance of tasks in laboratory-practical classes, testing, performance of tasks of independent work

3. MODULE INDICATIVE CONTENT

Autumn semester

Topics	Distribution of hours				Learning resources
	Directed study			Self-directed study	
	Lectures	Pract	Lab		
Topic 1. Rights and responsibilities of a forensic expert. Algorithm for conducting CEE. Forensic veterinary documentation.			2	4	1,2,8,11
Topic 2. Judicial liability of veterinary specialists.	2		2	4	1,2,8,11
Topic 3. Species identification of animals by osteometric parameters.			2	2	1,7,10,11
Topic 4. Fundamentals of forensic veterinary myology. Species identification of animals by muscle structure.			2	4	1,10,11,16
Topic 5. CVE in industrial poultry, pig and livestock.	2			6	1,2,11,22,23,24
Topic 6. SVE in case of illness and death of animals as a result of violations of the conditions of feeding, keeping and operation, cruel treatment of animals.	2		2	10	1,2,11
Topic 7. Application of knowledge of thanatology in the conduct of CVE.			2	4	1,8
Topic 8. Forensic veterinary examination for organopathology			2	12	1,2,3,4,5,6,9,11,12,13,25
Topic 9. Master the methods of CEE in the study of blood.			2	4	1,2,15,26
Topic 10. Master the methods of CEE in the study of the skin of different species of animals.			2	4	1,11,14,21,27
Topic 11. Master the methods of CEE in the study of hair of different species of animals.			2	4	1,11,14,21,27
Topic 12. Fundamentals of forensic veterinary examination of poisoning and toxicosis of animals			2	4	2,6,12,13
Totally	**16**	**-**	**44**	**30**	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
	.1.**Методи навчання за джерелом знань:**		5.**Методи навчання за характером та рівнем самостійної розумової діяльності студентів.**	
MLOs 1,2	1.1. Verbal: lecture, explanations in laboratory classes and consultations, work with the textbook.		5.1. Partial search method (according to the teacher's task, data is searched on the Internet, literature sources, etc.); 5.2. Research method - production of macrodrugs in the pathoanatomical museum of the department. 5.3.Reproductive - the application of the studied in practice. At consultations the explanation of incomprehensible questions with demonstration of drugs, tables, schemes, etc. is carried out.	
MLOs 1,2	1.2. Visual: demonstration - the study of the structure of tissues and organs at the microscopic level with the use of histological, pathoanatomical preparations, tables, manuals, atlases and macropreparations.			
MLOs 1,2	1.3.Practical: study of histological specimens, drawing the structure of tissues and organs in albums (for norms and pathologies).			
	2. Teaching methods by the nature of the logic of cognition:			
MLOs 1,2	2.1.Analytical - the study of the structure of the whole organism and its components - cells, tissues, organs for study, their importance in forensic veterinary practice.			
MLOs 1,2	2.2.Methods of synthesis - analysis of the structure of the skeleton and muscles as a component of morphological differentiation in forensic veterinary practice.			
MLOs 1,2	3. Active teaching methods: technical means (multimedia lectures), debates on problematic issues of any topic, checking tests with self-assessment of knowledge and work on errors; computer-based training and control tests or answers to questions suggested in the manuals; lecture notes and guidelines developed by teachers of the department.			
MLOs 1,2	4. Interactive learning technologies: multimedia lectures and demonstration of microfilms in laboratory classes, analysis of specific unclear issues and dialogue training.			

5.1.4. **5.2.1. Intended learning outcomes methods:**

No	Summative assessment methods	Grades	Deadline
	Autumn semester / Spring semester		
1.	Oral interview	15/15%	
2.	Solving crossword puzzles on the topics of the discipline	20/20%	By the end of the 13th week
3.	Computer testing of "Fundamentals of Cytology" (multiple choice) in Moodle	5/5%	By the end of 3 weeks
4.	Presentations with reports on topics	20/20%	In classes
5.	Computer testing "General embryology" (multiple choice) in Moodle	5/5%	By the end of the 5th week
6.	Computer testing "Epithelial, connective, muscular and nervous tissues" in Moodle	5/5%	By the end of 6 weeks
7.	Computer testing of "Nervous and cardiovascular systems" (multiple choice) in Moodle	5/5%	By the end of the 8th week
8.	Computer testing "Hematopoietic organs and endocrine system" (multiple choice) in Model	5/5%	By the end of the 9th week
9.	Computer testing "Digestive and respiratory organs. Organs of the genitourinary system "(multiple choice) in Moodle	5/5%	By the end of the 10th week
10.	Certification (multiple choice tests)	15/15%	By the end of the 5th week
	Total for 1 semesters	100 / 100%	

5.1.5. **Grading criteria**

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent
Oral interview	<5 балів	5-10	11-14	15
	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	All requirements of the task are fulfilled	All the requirements of the task have been fulfilled, creativity and thoughtfulness have been demonstrated
Solving crosswords puzzles on the topics of the discipline	<10	11-15	15-19	20
	Task requirements not met	Most requirements are met, but some components are missing or	All requirements of the task are fulfilled, the situational task is solved	All the requirements of the task have been fulfilled, creativity and

		insufficiently disclosed, there is no analysis of other approaches to the issue	completely, the report is made	thoughtfulness have been demonstrated
Presentations with reports on topics	<10	11-15	15-19	20
	Task requirements not met	The presentation is prepared, but the report is not clear, not logical	All the requirements of the task are met, the report and presentation meet the requirements	All the requirements of the task have been fulfilled, creativity and thoughtfulness have been demonstrated

5.2. Formative assessment

Formative exercises are designed to enable students to develop particular aspects of their learning, prior to summative assessments. Formative exercises are designed to help students use feedback and self-reflection to manage and develop their learning so that they can see how to improve their work.

No	Formative Assessment elements	Date
Autumn semester / Spring semester		
1.	Feedback aimed at supporting the student in understanding the correct structure of cells, tissues and organs of systems	Each time students answer
2.	Self-test of knowledge by solving crossword puzzles	Control at the beginning of classes
3.	Evaluation of the activity and effectiveness of the applicants' participation in the discussion of presentations. Comments and tips.	Every time in classes
4.	Feedback on comments and recommendations after presentations	According to the schedule by topics

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

6. LEARNING RESOURCES
6.1. Key resources
6.1.1. Basic

1.Зон Г.А. Основи судової ветеринарії: навчальний посібник. Суми: ВВП «Мрія-1», 2016. 624с.

2.Зон Г.А. Судово-ветеринарна експертиза: навчальний посібник Суми: ВВП "Мрія-1", 2012. вид. друге. 258 с.

3.Судова ветеринарна травматологія/ Г.А. Зон, Л.Б.Івановська. Суми: ВВП «Мрія-1», 2015. 82с.

4..Основи судово - ветеринарної експертизи отруєнь і токсикозів тварин: навчальний посібник
/ Г.А. Зон, Л.Б.Івановська. Суми: ВВП «Мрія-1»,ТОВ, 2012.124с.

5.Зон Г.А.,Івановська Л.Б., Скрипка М.В. Диференційна патологоанатомічна діагностика інфекційних хвороб тварин. Суми: ВВП "Мрія" ТОВ, вид.2-е, 2016. 206 с.

6. Зон Г.А., Івановська Л.Б Патологоанатомічний розтин трупів тварин: навчальний посібник. Суми: ВВП "Мрія " ТОВ,видання третє, 2018.336 с.

7.Костюк В.К. Атлас анатомії свійських тварин. Остеологія: навчальний посібник. К.:Аграрна освіта, 2001. 78с.

8Організаційні та процесуальні основи судово-ветеринарної експертизи в Україні:Навчальний посібник для магістрантів…Яценко І.В., Якубчак О.М.,Білик, Кам'янский В.В.. Харків, Київ, 2009. 108с.

9.Патологічна анатомія тварин / Під ред. П.П. Урбановича і М.К. Потоцького К.: Ветінформ, 2008. 896 с.

10.Практика судово-ветеринарної експертизи: Хрестоматія.Яценко І.В.Труш А.М.,Бондаревський М.М. Кам'янский В.В.. Харків:Стиль-издат,2013.256с.

Guidelines

11.Moodle з дисципліни порівняльна морфологія, спеціальна патоморфологія та судова ветеринарна медицина. Суми. СНАУ,2021р.

12.Патологічна анатомія: частина 1. Загальна патологічна анатомія. Методичні вказівки до виконання лабораторних занять та самостійної роботи/ Г.А. Зон,Л.Б.Івановська. Суми, 2014. 64 с.

13.Патологічна анатомія: частина 2. Загальна патологічна анатомія. Методичні вказівки до виконання лабораторних занять та самостійної роботи / Г.А.Зон, Л.Б.Івановська, В.В. Сорокова Суми, 2014. 64 с.

14.Навчально-методичний посібник до виконання лабораторно-практичних занять на тему: Судово-ветеринарне дослідження речових доказів: гістологічна ідентифікація волосу тварин» для спеціальності 211- «ветеринарна медицина» ОКР «магістр»,Укладачі Зон Г.А.,Івановська Л.Б. СНАУ, Суми,2015. 62с.

15.Методичні рекомендації щодо проведення самостійної роботи для студентів 1 курсу та магістрів спеціальності 211-«ветеринарна медицина»ОКР «магістр». Укладачі Зон Г.А.,Івановська Л.Б. Тема: «Тканини внутрішнього середовища. Кров різних видів тварин», СНАУ, Суми, 2015.-27с.

16.Методичні вказівки щодо проведення самостійної роботи студентів спеціальності 211 - «Ветеринарна медицина». Укладач В.В. Гаркава. Тема: «М'язові тканини», СНАУ, Суми, 2016. 32с.

17.Методичні вказівки щодо проведення самостійної роботи студентів спеціальності 211 - «Ветеринарна медицина». Тема: «Органи дихання тварин» Укладачі: Є.В. Ващик,В.В.Гаркава. СНАУ, Суми,2014. 24с.

18.Методичні вказівки щодо проведення лабораторних занять для студентів спеціальності 211 - «Ветеринарна медицина». Тема: «Серцево-судинна система тварин» Укладач В.В.Гаркава. СНАУ, Суми, 2013. 25с.

19.Методичні вказівки щодо проведення самостійної роботи студентів «Тканини внутрішнього середовища. Кров різних видів тварин» для спеціальності 211 - «Ветеринарна медицина». Укладач: В.В.Гаркава. СНАУ, Суми, 2016. 27с.

20.Методичні вказівки щодо проведення самостійної роботи студентів спеціальності 211 - «Ветеринарна медицина». Тема: «Органи сечовиділення» Укладачі: В.В.Гаркава, Ващик Є.В. СНАУ, Суми, 2014.28с.

21.Морфологічні особливості шкіри та волоса різних видів тварин і людини в аспекті судово-ветеринарної експертизи: посібник/Г.І. Коцюмбас, І.Я. Коцюмбас, О.М. Щебентовська, Р.С.Данкович, О.О.Зайцев, Л.:ТЗОВ ВФ «Афіша», 2010.136с.

22.Патологоанатомическая диагностика болезней крупного рогатого скота. Акулов А.В., Апатенко В.М.,Архипов Н.И. и др. М.: Агропрмиздат, 1987. 399 с.

23.Патологоанатомическая диагностика болезней свиней. Авроров А.А. и др., М.: Колос, 1984.335 с.

24.Патологоанатомічна діагностика хвороб птиці: навчальний посібник /Л.Б.Івановська,Г.А.Зон. Суми: ВВП «Мрія-1», 2017. 156с.

25.Довідник патолого-анатомічних термінів. Борисевич Б.В., Скрипка М.В., Лісова В.В. – Полтава, 2005. 124 с.

Additional resources

26.http://vetpathology.lviv.ua/biblioteka_studenta.html

27.http://www.vetkzn.ru/literatura/veterinarnye_uchebniki/
    https://vet.snau.edu.ua/kafedri/kafedra-ekonomiki/metodichna-robota/