

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY

Virology, Patanatomy and Poultry diseases Department
Faculty of Veterinary medicine

MODULE SYLLABUS
Forensic veterinary examination
(optional)

Implemented in the "Veterinary medicine" Academic Program

Area of specialization 211 "Veterinary medicine"

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

Sumy - 2023

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Module syllabus agreed at the Department meeting Minutes № 15 dated May 19, 2023

Head of Virology, patanatomy and poultry diseases Department [Signature] (R. Petrov)

Approved by:

Guarantor of the Academic program [Signature] (R Petrov)

Dean of the Faculty [Signature] (O. Nechiporenko)

Syllabus review (attached) is provided by : [Signature] [Signature] (S.H.I.H.)

Representative of the Department of Education Quality assurance, licensing and accreditation [Signature] (H. Baranik)

Registered in electronic data base [Signature] 2023

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	Forensic veterinary examination		
2.	Faculty/Department	Veterinary medicine/Virology, Patanatomy, Poultry diseases		
3.	Type (compulsory or optional)	optional		
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	7		
8.	ECTS credits number	5		
9.	Total workload and time allotment	Directed study		Self-directed study
		Lectures	Practicals	Labs
		-	-	22
				128
10.	Language of instruction	English		
11.	Module leader	Associate Professor of Virology, Pathanatomy and Poultry Diseases Department, c. vet. med. Ivanovskaya L.B.		
12.	Module leader contact information	FVM, office 15 or 17, 0965384585, lusj0951@gmail.com consultations every Friday from 14-15 to 15-30		
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,		

		<p>academic fraud (copying, deception, publishing someone's work for their own), the use of electronic devices during the final control of knowledge.</p> <p>For violation of academic integrity, students may be held subject to the following academic liability:</p> <p>Academic plagiarism - grade 0, re-completion of the task.</p> <p>Academic fraud - cancellation of points; re-assessment, re-execution of non-independently performed work with new source data;</p> <p>The use of electronic devices during the final control of knowledge - removal from work, grade 0, re-passing the final control.</p>
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	10	1,2,3,5,6
Topic 2. Judicial liability of veterinary specialists.			2	10	1,2,3,5,6
Topic 3. Species identification of animals by osteometric parameters.				4	1,2,3,5,6,7
Topic 4. Fundamentals of forensic veterinary myology. Species identification of animals by muscle structure.			2	10	1,2,3,5,6
Topic 5. CVE in industrial poultry, pig and livestock.			2	10	1,2,3,5,6
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	10	1,2,3,5,6
Topic 7. Application of knowledge of thanatology in the conduct of CVE.			2	10	1,2,3,5,6
Topic 8. Forensic veterinary examination or organopathology			2	20	1,2,3,5,6
Topic 9. Master the methods of CEE in the study of blood.			2	10	1,2,3,5,6,10
Topic 10. Master the methods of CEE in the study of the skin of different species of animals.			2	10	1,2,3,5,6,11
Topic 11. Master the methods of CEE in the study of hair of different species of animals.			2	10	1,2,3,5,6,9
Topic 12. Fundamentals of forensic veterinary examination of poisoning and toxicosis of animals			2	14	1,2,3,4, 5,6
Totally	-	-	22	128	

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLOs 162	Verbal: explanations in laboratory classes and consultations, work with the textbook.		Partial search method (according to the teacher's task, data is searched on the Internet, literature sources, etc.); Research method - production of macrodrugs in the pathoanatomical museum of the department. 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. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

Autumn semester			
1	Topic 1. Rights and responsibilities of a forensic expert. Algorithm for conducting CEE. Forensic veterinary documentation.	10 /10%	By the end of 3 week
2	Topic 2. Judicial liability of veterinary specialists.	10 /10%	By the end of 4 week
3	Topic 3. Species identification of animals by osteometric parameters.	5 /5%	By the end of 2 week
4	Topic 4. Fundamentals of forensic veterinary myology. Species identification of animals by muscle structure.	10 /10%	In classes
5	Topic 5. CVE in industrial poultry, pig and livestock.	5 /5%	By the end of 5 week
6	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.	10 /10%	By the end of 6 week
7	Topic 7. Application of knowledge of thanatology in the conduct of CVE.	10 /10%	By the end of 7 week
8	Topic 8. Forensic veterinary examination for organopathology	10 /10%	By the end of 8 week
9	Topic 9. Master the methods of CEE in the study of blood.	10 /10%	In classes
10	Topic 10. Master the methods of CEE in the study of the skin of different species of animals.	10 /10%	In classes
11	Topic 11. Master the methods of CEE in the study of hair of different species of animals.	10 /10%	In classes
12	Topic 12. Fundamentals of forensic veterinary examination of poisoning and toxicosis of animals	10 /10%	By the end of 13 week
Total for semesters		100 / 100%	

5.2.2. 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 insufficiently	All requirements of the task are fulfilled, the situational task is solved completely, the	All the requirements of the task have been fulfilled, creativity and thoughtfulness

		disclosed, there is no analysis of other approaches to the issue	report is made	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

5.3. Formative assessment

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

No	Formative Assessment elements	Date
Autumn semester / 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

Basic

- Melinda D. Merck (2013). *Veterinary Forensics: Animal Cruelty Investigation*; 2nd ed. Oxford: John Wiley & Sons, Inc., Publication. 402 p. www.wiley.com/go/vetforensics
- Ranald Munro & Helen M. C. Munro (2008). *Animal abuse and unlawful killing. Forensic veterinary pathology*. Printed in China by RDC Group Limited. 106 p.
- Zon G.A. (2016). *Fundamentals of forensic veterinary medicine: study guide*. Sumy: VVP "Mriya-1". 624 p. [Ukrainian]
- Zon G.A. & Ivanovska L.B. (2012). *Basics of forensic veterinary examination of poisonings and toxicosis: training manual*. Sumy: VVP "Mriya-1". 124 p. [Ukrainian]
- Jason W. Brooks (2018). *Veterinary Forensic Pathology: Volume 1 and 2*
- Omer K. Baba, Naresh K. Sood. Kuldip Gurta (2016). *Veterinary Forensic Pathology*.
- Kostyuk V.K. (2001). *Atlas of anatomy of domestic animals. Osteology: a study guide*. K.: Agrarian education. 78 p. [Ukrainian]
- Practice of forensic veterinary examination: Bibliography. Yatsenko I.V. Trush A.M., Bondarevskiy M.M. V. V. Kamiansky. Kharkiv: Styl-izdat, 2013. 256 p. [Ukrainian]

Guidelines

- Educational and methodological guide for the performance of laboratory and practical classes on the topic: Forensic veterinary examination of material evidence: histological identification of animal

hair" for the specialty 211- "veterinary medicine" OKR "master's degree", Compilers Zon G.A., Ivanovska L.B. SNAU, Sumy, 2015. 62 p. [Ukrainian]

10. Methodological recommendations for conducting independent work for 1st-year students and masters of specialty 211-"veterinary medicine" OKR "master". Organizers Zon G.A., Ivanovska L.B. Topic: "Tissues of the internal environment. Blood of different species of animals", SNAU, Sumy, 2015. 27p. [Ukrainian]

11. Morphological features of skin and hair of different species of animals and humans in the aspect of forensic veterinary examination: manual/G.I. Kotsyumbas, I.Ya. Kotsyumbas, O.M. Shchebentovska, R.S. Dankovich, O.O. Zaitsev, L: T3OV VF "Afisha", 2010.136p. [Ukrainian]

Other sources

<https://library.snau.edu.ua>

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

http://www.vetkzn.ru/literatura/veterinarnye_uchebniki/

www.wiley.com/go/vetforensics

<https://www.vet-ebooks.com/veterinary-forensic-pathology-volume-1-and-2/>