MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRARIAN UNIVERSITY

Anatomy, Normal and Pathological Physiology Department
Faculty of Veterinary Medicine

MODULE SYLLABUS

Anatomy of domestic animals

(compulsory)

Implemented in the "Veterinary medicine" Academic Program

Area of specialization 211 "Veterinary medicine"

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

Sumy-2021

Author: _____ (**Yevheniia Livoshchenko** Associate Professor)

Module syllabus agreed at the Anatomy, Normal and Pathological Physiology Department meeting	Minutes No 15 dated June 23 2021
	Head of Anatomy, Normal and Pathological Physiology Department _____ (Kambur MD)

Approved by:

Guarantor of the Academic program _____ (Ulko L.G.)

Dean of the Faculty of Veterinary Medicine _____ (Nechiporenko O.L.)

Syllabus review (attached) is provided by : _____ (Petrov R.V.)
_____ (Plyuta L.V.)

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

Registered in electronic data base 19.07. 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
2021-2022		Minutes No 15 dated June 23 2021	Kambur MD	Ulko LG

1. MODULE OVERVIEW

<table>
<tr><td>1.</td><td>Title</td><td colspan="4">Anatomy of domestic animals</td></tr>
<tr><td>2.</td><td>Faculty/Department</td><td colspan="4">Faculty of Veterinary Medicine/ Anatomy, Normal and Pathological Physiology Department</td></tr>
<tr><td>3.</td><td>Type (compulsory or optional)</td><td colspan="4">compulsory</td></tr>
<tr><td>4.</td><td>Program(s) to which module is attached (to be filled in for compulsory types)</td><td colspan="4">211 - Veterinary medicine/ Faculty of Veterinary Medicine</td></tr>
<tr><td>6.</td><td>Level of the National Qualifications Framework</td><td colspan="4">7</td></tr>
<tr><td>7.</td><td>Semester and duration of module</td><td colspan="4">3 Semester /1-18</td></tr>
<tr><td>8.</td><td>ECTS credits number</td><td colspan="4">14</td></tr>
<tr><td rowspan="3">9.</td><td rowspan="3">Total workload and time allotment</td><td colspan="3">Directed study</td><td>Self-directed study</td></tr>
<tr><td>Lectures</td><td>Practicals</td><td>Labs</td><td></td></tr>
<tr><td>6</td><td>0</td><td>16</td><td>188
44/68</td></tr>
<tr><td>10.</td><td>Language of instruction</td><td colspan="4">English</td></tr>
<tr><td>11.</td><td>Module leader</td><td colspan="4">Associate Professor Yevheniia Livoshchenko</td></tr>
<tr><td>12.</td><td>Module leader contact information</td><td colspan="4">Faculty of Veterinary Medicine. Department of Anatomy, Normal and Pathological Physiology. G. Kondratieva Street 160/3, office 19, room 4. T.050-913-60-82</td></tr>
<tr><td>13.</td><td>Module description</td><td colspan="4">The discipline "Anatomy of domestic animals" is one of the fundamental disciplines, which covers the structure of the body of animals of different species.</td></tr>
<tr><td>14.</td><td>Module aim</td><td colspan="4">The aim is to study the structure of the body of domestic animals in inseparable connection with its functions and development.</td></tr>
<tr><td>15.</td><td>Module Dependencies (prerequisites, co-requisites, incompatible modules)</td><td colspan="4">1. The educational component is based on zoology, Latin
2. The educational component is the basis for physiology, history, obstetrics, clinical diagnosis, therapy, surgery, veterinary examination and other sections of veterinary medicine.
3. Educational component incompatible with the economy, mechanization</td></tr>
<tr><td>16.</td><td>The policy of academic integrity</td><td colspan="4">During the study of the educational component, any manifestations of academic dishonesty are not allowed. Systems are tools for counteracting violations of academic integrity "Plagiarism 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</td></tr>
<tr><td>17</td><td>Link in Moodle</td><td colspan="4">https://cdn.snau.edu.ua/moodle/course/view.php?id=3164</td></tr>
</table>

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 3**	
MLO 1. Find the components of the heart on the drug. Find all the main vessels and branches that branch off from them. Find all major lymph vessels and nodes. Know the structure of hematopoietic organs and organs of the endocrine system. Be able to describe them using Latin terminology			Oral interview after studying the topic using native drugs. -testing, -performance of tasks of independent work
MLO 2. Find the spinal cord, brain on the drug and their components. Find nerves and their branches on the drug and the animal, identify their topographic features. Be able to name them using Latin terminology			Oral interview after studying the topic using native drugs. -testing, -performance of tasks of independent work
MLO 3. Know the structure of analyzers. Find on the drug components of the senses to identify their species characteristics. Be able to describe them using Latin terminology			Oral interview after studying the topic using native drugs. -testing, -performance of tasks of independent work
MLO 4. Know the structure of poultry organs, determine the location of individual organs in different parts of the bird's body. Be able to describe them using Latin terminology			Oral interview after studying the topic using native drugs. -testing, -performance of tasks of independent work

3. MODULE INDICATIVE CONTENT

Autumn semester (2 year, 3 semester**)**

Topics	**Distribution of hours**					**Learning resources**
	Directed study			**Self-directed study**	**Educational**	
	Lectures	**Practicals**	**Labs**			No
Topic 1. The structure of the heart. Circulation in the fetus and adult animal	**2**		2	10		1, 2, 4, 5, 7, 8, 9.
Topic 2. Vessels of the great circle of blood circulation. Lymphatic system.			**4**	**10**		1, 2, 4, 5, 7, 8, 9.
Topic 3. Central nervous system	**2**		**2**	**10**		1, 2, 6, 7, 8, 9.
Topic 4. Cranial and spinal nerves.			**2**	**10**		1, 2, 6, 7, 8, 9.
Topic 5. Autonomic nervous system.			**2**	**10**		1, 2, 6, 7, 8, 9.
Topic 6. Sense organs.	**2**		**2**	**10**		1, 2, 7, 8, 9.
Topic 7. Anatomy of a bird.			**2**	**8**		1, 2, 3, 7, 8, 9.
TOTAL HOURS FOR 3 SEMESTERS	**6**		**16**	**68**		

4. TEACHING AND LEARNING METHODS

MLOs	Teaching methods (directed study)	Hours	Learning methods (self-directed study)	Hours
MLO 1. Find the components of the heart on the drug. Find all the main vessels and branches that branch off from them. Find all major lymph vessels and nodes. Know the structure of hematopoietic organs and organs of the endocrine system. Be able to describe them using Latin terminology	Methods of teaching by source of knowledge: Verbal: story, explanation, conversation (heuristic and reproductive), lecture, instruction. Visual: demonstration, illustration. Active methods: (use of technical teaching aids, use of training and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets.	8	Methods of teaching by source of knowledge: Verbal: work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observation. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method, translational method). Active methods (mind maps, brainstorming, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research). Interactive learning technologies (use of multimedia technologies, dialogue learning, student cooperation (cooperation)	20
MLO 2. Find the spinal cord, brain on the drug and their components. Find nerves and their branches on the drug and the animal, identify their topographic features. Be able to name them using Latin terminology	Methods of teaching by source of knowledge: Verbal: story, explanation, conversation (heuristic and reproductive), lecture, instruction. Visual: demonstration, illustration. Active methods: (use of technical teaching aids, use of training and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets.	8	Methods of teaching by source of knowledge: Verbal: work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observation. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method, translational method). Active methods (mind maps, brainstorming, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research). Interactive learning technologies (use of multimedia technologies, dialogue learning, student cooperation (cooperation)	30
MLO 3. Know the structure of sense organs. Find on the components of the senses to	Methods of teaching by source of knowledge: Verbal: story, explanation, conversation (heuristic and reproductive), lecture, instruction.	4	Methods of teaching by source of knowledge: Verbal: work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observation.	10

identify their species characteristics. Be able to describe them using Latin terminology	Visual: demonstration, illustration. Active methods: (use of technical teaching aids, use of training and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets.		Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method, translational method). Active methods (mind maps, brainstorming, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research). Interactive learning technologies (use of multimedia technologies, dialogue learning, student cooperation (cooperation)	
MLO 4. Know the structure of poultry organs, determine the location of individual organs in different parts of the bird's body. Be able to describe them using Latin terminology	Methods of teaching by source of knowledge: Verbal: story, explanation, conversation (heuristic and reproductive), lecture, instruction. Visual: demonstration, illustration. Active methods: (use of technical teaching aids, use of training and control tests) Interactive teaching methods: (use of multimedia technologies, spreadsheets.	2	Methods of teaching by source of knowledge: Verbal: work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), Visual: observation. Teaching methods by the nature of the logic of cognition (analytical, synthesis methods, inductive method, deductive method, translational method). Active methods (mind maps, brainstorming, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research). Interactive learning technologies (use of multimedia technologies, dialogue learning, student cooperation (cooperation)	8
		22		68

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods:

No	Summative assessment methods	Grades	Deadline
Autumn semester			
1.	Thematic survey	20 points/ 20 %	Weekly
2.	Execution of tasks in laboratory-practical classes	20 points /20 %	According to the schedule
3.	Testing	15 points/ 15 %	For 7-8 weeks
4.	Report with a presentation on the subject of independent study of the discipline	15 points / 15%	According to the schedule of delivery of modules
5.	Exam - in writing	30 points / 30 %	According to the schedule

5.2.2. Grading criteria

Autumn semester (2nd year, 3rd semester)

Summative assessment method	Unsatisfactory	Satisfactory	Good	Excellent
Thematic survey	*<12* points	*12-15* points	*15-18* points	*20* points
	The student can play only individual fragments of the course.	Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	All requirements of the task are fulfilled	All requirements of the task are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered
Execution of tasks in laboratory-practical classes	*<12* points	*12-15* points	*15-18* points	*20* points
	Task requirements not met	Most of the tasks are performed using the basic theoretical principles, the student has difficulty explaining the rules for solving laboratory-practical problems. Execution of individual control tasks is significantly formalized, there is no deep understanding of the work	The student has mastered the basic material, and understands and performs laboratory-practical tasks, has suggestions on the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar problems that were discussed with the teacher, but admits a small number of inaccuracies.	The applicant implements the theoretical material of the discipline in the performance of laboratory and practical work, is able to analyze and compare the results obtained on the basis of acquired knowledge, skills, practical skills in this discipline
Multiple selection test	*<12* points	*12-15* points	*15-18* points	*20* points
	The student gives the correct answer to several questions (≤ 33% of the correct answers).	The student has certain knowledge provided in the program of the discipline, has the basic provisions studied and gives the correct answer to several questions (34-59% of the correct answers).	The student is generally well versed in the material, knows the basic provisions of the material, and gives the correct answer to several questions (60-89% of the correct answers).	The student demonstrates complete and solid knowledge of the study material in the amount that corresponds to the program of the discipline, correctly answers the test questions (90-100% of correct answers).
Design and presentation of self-developed	≤ 5 points	6–9 points	10–13 points	14–15 points
	The student does not have a	Despite the fact that the student	Knows the basic provisions that are	All requirements, tasks are fulfilled,

material	complete understanding of the material on the discipline. The student did not perform independent study of the material.	completed the curriculum, but some components are missing or insufficiently developed, the student worked passively.	crucial in performing independent work / individual tasks. Errors in the answers are not significant.	creativity, thoughtfulness is shown, own solution of a problem is offered.
Examination	*<15* points	*16-20* points	*20-28* points	*29-30* points
	The integrity of the student's understanding of the material on the discipline is missing. The correctness of the answer ≤ 33%	Despite the fact that the student answered the question, but the answer is not complete and the main essence is not fully disclosed, some components are missing.	In his answer, the student revealed the main provisions of the questions that are crucial in the performance of work. Errors in the answers are not significant.	The issues are fully disclosed. The student is fluent in the material, operates with knowledge not only from the textbook, but also additional literature. Demonstrates creativity, thoughtfulness.

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	
1.	Oral audio communication after studying topics 1,2,3,4,5,6,7	2,4,6,8,10,12,14,15, 18 weeks of the semester
2.	Written feedback after studying topics 1-3 and 4-8.	8, 15,18 weeks of the semester
3.	Written feedback from the teacher while working on laboratory-practical tasks	Within 1 week after execution
4.	Oral feedback from the teacher after the report with a presentation on the topic of independent study of the discipline	During classes
5.	Oral feedback from the teacher after the exam.	The day after the exam.

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

6. LEARNING RESOURCES

6.1. Key resources

1. Konig H. E. Veterinary Anatomy of Domestic Mammals: Textbook and Colour Atlas. / ed. H. E. Konig, H. G. Liebich. – London: Schattauer, 2003. – 681 p.
2. Anatomy of Domestic Animals: Systemic & Regional Approach / [C. Pasquini, T. Spurgeon, S. Publishing та ін.]. –Tomajwwii, 2010. – 660 p.
3. McLelland J. A Colour Atlas of Avian Anatomy / John McLelland McLelland. – England.: BPCC Hazell Books Ltd. Avlesburv., 1990. – 144 c.

6.2. Guidelines.

4. Anatomy of domestic animals. **Organs of the cardiovascular system** (systema cardiovasculare): Methodological guidelines for conducting lectures, laboratory practical classes, independent work / [М.Д.Камбур, Є.М.Лівощенко, Л.Г.Плюта та ін.]. – Sumy: видавничий центр Сумського НАУ, 2020. – 45с.

5. Ангіологія: анатомічний українсько-латинськико-англійський словник-довідник / [Камбур М.Д., Замазій А.А., Лівощенко Є.М. та ін.]. – Суми: видавничий центр Сумського НАУ, 2008. – 45 с.

6. Anatomy of domestic animals. **Nervous system. Brain (encephalon)**: Methodological guidelines for conducting lectures, laboratory practical classes, independent work/ [М. Д. Камбур, Є. М. Лівощенко, Л.Г. Плюта та ін.]. – Суми: видавничий центр Сумського НАУ, 2018. – 20 с.

6.3. Additional resources

7. Color Atlas of Large Animal Applied Anatomy: By Hillary Clayton and Peter Flood 1st Edition / [Hilary M., Clayton, Peter F., Flood, with David Mandeville., Charles Farrow] – 2006 – 123 p.

8. Horse Anatomy: A Coloring Atlas / [Thomas O., McCracken, Robert A.. Kainer, Thomas O., MS McCracken, Robert A., DVM Kainer], 2000 –185 p.

9. Дибенко К. А. Анатомічний українсько-латинсько-англійський словник-довідник: Посібник. / К. А. Дибенко. – К.: Довіра, 1997. – 281 с.

6.4. Computer Applications and soft

Internet Polyglot – http://www.internetpolyglot.com/lessons-ln-en
http://www.vetcvas.com/2015/08/nutrition-and-disease-management-for.html
http://goraknig.org/estestvennye_nauki/?kniga=MTg2Mjc1Mg__
http://ebookee.org/Color-Atlas-of-Small-Animal-Anatomy-The-Essentials_4618091.html
http://www.meduweb.com/forums/193-anatomy-books
http://www.vetcvas.com/2012/06/anatomy-of-domestic-animals.html
http://pdfdownloadonline.com/veterinary-anatomy-coloring-book-2e-by-saunders/