



Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Veterinary Medicine
Department of Obstetrics and Surgery

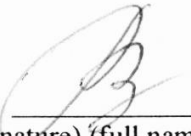
Work program (syllabus) of the educational component
(required)

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

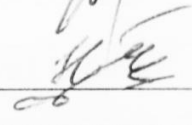
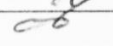
Author:  Chekan O.N., Associate Professor

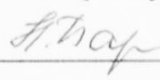
Module syllabus agreed at the Obstetrics and Surgery Department meeting	Minutes No <u>14</u> dated June <u>30</u> 2023
	Head of Obstetrics and Surgery Department <u></u> (Shkromada O.I.)

Approved by:

Guarantor of the educational program  Ulko L.G.
(signature) (full name)

Dean of the faculty  Nechiporenko O.L.

Syllabus review (attached) is provided by :  (Sklyar O.I.)
 (Pluta L.V.)

Representative of the Department of Education Quality assurance,
licensing and accreditation  (J. Naparin)

Registered in electronic data base 19.07. 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	General and special surgery		
2.	Faculty/Department	Faculty of Veterinary Medicine, Department of Obstetrics and Surgery		
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	(2 master's) 7		
7.	Semester and duration of module	VI semester 1-18		
8.	ECTS credits number	VI semester: 3 credits total : 90 hours, aud . 10, incl. 8 hours lectures, 8 hours labs, Self-directed : 74 hours , credit		
9.	Total workload and time allotment	Directed study		Self-directed study
		Lectures	Practicals	Labs
	VI semester	8		8
10.	Language of instruction	English		
11.	Module leader	Chekan Alexander Nikolaevich		
12.	Module leader contact information	oleksandr.chekan@snau.edu.ua		
13.	Module description	<p>OP General and special surgery is part of the educational process related and with common goals to train highly qualified veterinarians . Provides mastery of methods of surgical intervention in various emergencies of the animal , prepares students to master the OP of clinical disciplines by studying the pathological processes of all body systems and the existence of the body as a whole. Assimilation of material from this OP forms the basis of surgical knowledge of the student and the future veterinarian, contributes to the professional development of the student.</p>		
14.	Module aim	<p>The purpose of the educational component OK at General and special surgery has the purpose of students' special competences on theoretical foundations, rules, methods and application techniques of anesthesia and perform surgical procedures in animals . It is a component of the learning process that ensures the achievement of goals, competencies and</p>		

		significant results in the learning process.
15.	Module Dependencies (prerequisites, co-requisites, incompatible modules)	<ol style="list-style-type: none"> 1. Normative discipline "General and special surgery" is based on knowledge of such disciplines as "Animal Anatomy", "Cytology, Histology, Embryology", "Chemistry", "Animal Physiology", "Pathological Physiology", "Veterinary Microbiology", "Clinical diagnosis and diagnostic imaging", "Pharmacology and pharmacotherapy", studied in previous semesters . 2. writing a master's thesis
16.	The policy of academic integrity	<p>Assimilation of OK in compliance with academic integrity, plagiarism is prohibited. In case of systematic violation of these requirements, it is recommended to re-study the OK.</p> <p>In case of plagiarism in the performance of tasks - they are performed repeatedly</p>
17	Link in Moodle	https://cdn.snau.edu.ua/moodle/course/view.php?id=4001

4. Structure of the academic discipline

Names of content modules and topics	Number of hours			
	Total	L	Lab	I.w.
1	2	3	4	5
Module 1. Anesthesiology of animals.				
Content module 1. Basic principles and technique of anesthesia				
Theme 1. General principles of anesthesia.	2	2		
Theme 2. Medicines that are used in anesthesia practice.	16		2	14
Theme 3. Preoperative examination of animals, zinc and functional state of various organs and body systems.	34		4	30
Theme 4. Types of anesthesia.	18		8	10
Theme 5. Technique and clinic of general anesthesia.	4		4	
Theme 6: Complications of general anesthesia.	2	2		
Together with the content module 1.	76	4	18	54
Content module 2. Features of anesthesia during planned and emergency interventions.				
Theme 7. Anesthesia for various planned interventions.	2	2		
Theme 8. Emergency anesthesiology.	16	2	8	6
Together with the content module 2.	18	4	8	6
Total hours	94	8	26	60
Module 2. Intensive care and resuscitation in animals.				
Content module 3. Principles and techniques of intensive care.				
Theme 9. Principles of intensive care. Correction of metabolism.	22	4	4	14
Theme 10. Techniques using in anesthesia practice.	12		4	8
Together with the content module 3.	34	4	8	22

Content module 4. Activities of resuscitation and intensive care.				
Theme 11. Resuscitation and intensive care in small animals.	22	2	12	8
Together with the content module 4.	22	2	8	8
Total hours	56	6	20	30
Total hours per semester	150	14	46	90

5. Topics and plan for lecture classes

№	Topic Title	Amount hours
1	Topic 1. General principles of anesthesia. Plan: 1. The physiology of pain. 2. Characterization of stages and levels of anesthesia.	2
2	Topic 6: Complications of general anesthesia. Plan: 1. Complications at the stage of anesthesia. 2. Complications in the period of anesthesia support. 3. Complications of the narcosis period.	2
3	Theme 7. Conducting anesthesia for various planned interventions. Plan: 1. Anesthesia in operations on the abdominal organs. 2. Anesthesia in operations on the thoracic wall organs. 3. Anesthesia in traumatological operations. 4. Anesthesia in ophthalmic and otorhinolaryngological operations. 5. Anesthesia in outpatient practice. 6. Anesthesia in old animals. 7. Anesthesia in puppies and kittens.	2
4	Topic 8. Emergency anesthesiology. Plan: 1. Inspection and assessment of the general condition of the animal. 2. Anesthesia and intensive care for hemorrhagic and traumatic shock.	2
5	Theme 9. Principles of intensive care. Correction of metabolism. Plan: 1. Water-electrolyte exchange. 2. Correction of metabolic disorders. 3. Correction of the acid-base state. 4. The role of ions in the exchange of processes.	2
6	Theme 9. Principles of intensive care. Plan: 1. Artificial ventilation of lungs. 2. Inhalation therapy. 3. Antibacterial therapy. 4. Prophylaxis and treatment of decubitus. 5. Hemodialysis and peritoneal dialysis.	2
7	Topic 11. Resuscitation and intensive care in small animals. Plan: 1. Acute respiratory failure. 2. Acute cardiovascular insufficiency.	2
Total:		14

6. Themes of laboratory exercises

№	Topic Title	Amount hours
1	<p>Topic 2. Medicines that are used in anesthesia practice.</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Inhalational anesthetics. 2. Non-inhaling anesthetics. 3. Local anesthetics. 	2
2	<p>Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems.</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Anamnesis and general review. 2. Clinical research. 3. Clinical significance of the studies. <ol style="list-style-type: none"> 3.1. Respiratory system. 3.2. The cardiovascular system. 	2
3	<p>Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems.</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Clinical significance of the studies. <ol style="list-style-type: none"> 1.1. Endocrine system. 1.2. Water-electrolyte balance and acid-base state. 1.3. Function of the liver. 	2
4	<p>Topic 4. Types of anesthesia.</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Local anesthesia. <ol style="list-style-type: none"> 1.1. Types of local anesthesia. 1.2. Superficial anesthesia. 1.3. Infiltration anesthesia. 	2
5	<p>Topic 4. Types of anesthesia</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Local anesthesia. <ol style="list-style-type: none"> 1. 1. Conductor anesthesia. 1. 2. Spinal anesthesia. 	2
6	<p>Topic 4. Types of anesthesia</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Local anesthesia. <ol style="list-style-type: none"> 1. 1. Intraosseous anesthesia. 1. 2. Intravenous regional anesthesia. 1. 3. Blockade of cross section. 	2
7	<p>Topic 4. Types of anesthesia</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. General anesthesia. <ol style="list-style-type: none"> 1.1. Inhalation anesthesia. 1.2. Non- inhalation anesthesia. 1.3. Combined methods of general anesthesia. 	2
8	<p>Theme 5. Technique and clinic of general anesthesia.</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Choice of anesthesia. 2. Premedication. 	2
9	<p>Theme 5. Technique and clinic of general anesthesia.</p> <p>Plan:</p> <ol style="list-style-type: none"> 1. Carrying out anesthesia. <ol style="list-style-type: none"> 1.1. Introduction to anesthesia. 1.2. Maintaining anesthesia. 1.3. Termination of anesthesia. 1.4. Post-amniotic period. 2. Examples of general anesthesia 	2

10	Theme 8. Anesthesia and intensive care for hemorrhagic and traumatic shock. Plan: 1. Fighting respiratory failure. 2. Surgical manipulation for damage to the abdominal organs.	2
11	Theme 8. Anesthesia and intensive care for hemorrhagic and traumatic shock. Plan: 1. Methods to combat shock.	2
12	Topic 8. Anesthesia and intensive care for acute intestinal obstruction, peritonitis. Plan: 1. Classification of acute intestinal obstruction. 2. Intensive therapy for acute intestinal obstruction and peritonitis.	2
13	Topic 8. Emergency anesthesia in obstetrics. Plan: 1. Features of the physiological state of pregnant animals. 2. Dangers and complications associated with anesthesia in obstetrics. 3. Anesthesia in emergency cesarean section.	2
14	Topic 9. Infusion-hemotransfusion therapy and parenteral nutrition. Plan: 1. Blood transfusion.	2
15	Topic 9. Infusion-hemotransfusion therapy and parenteral nutrition. Plan: 1. Infusion-transfusion tactics for some severe conditions. 2. Parenteral nutrition. 3. Enteral nutrition.	2
16	Topic 10. Techniques used in anesthesia practice. Plan: 1. Venepuncture, catheterization of veins and arteries.	2
17	Topic 10. Techniques used in anesthesia practice. Plan: 1. Puncture of the pleural cavity. 2. Intubation of the trachea. 3. Tracheostomy. 4. Prolonged catheterization of the bladder.	2
18	Theme 11. Treatment of specific types of acute respiratory failure. Plan: 1. Foreign bodies of pharynx, larynx. 2. Allergic edema of the larynx. 3. Acute strangulation asphyxiation (hanging). 4. Acute pulmonary edema.	2
19	Theme 11. Treatment of specific types of acute respiratory failure. Plan: 1. Two-sided severe pneumonia. 2. Thoraco-abdominal insufficiency. 3. Postoperative acute respiratory failure. 4. Electrical injury.	2
20	Topic 11. Acute renal and hepatic insufficiency. Plan: 1. Acute renal failure. 2. Acute liver failure. 3. Coagulopathic bleeding.	2
21	Topic 11. Intensive therapy for acute exogenous poisoning. Plan: 1. Clinic of acute exogenous poisoning 2. Intensive therapy for acute exogenous poisoning 3. Antidotes.	2
22	Theme 11. Intensive therapy for acute exogenous poisoning Plan:	2

	<ol style="list-style-type: none"> 1. Poisoning with antibiotics. 2. Poisoning with antipsychotics. 3. Food poisoning. 4. Carbon monoxide poisoning. 5. Bites of insects. 6. Poisoning with organophosphorus compounds. 	
23	Theme 11. Intensive therapy for acute exogenous poisoning Plan: <ol style="list-style-type: none"> 1. Carbon monoxide poisoning. 2. Bites of insects. 3. Poisoning with organophosphorus compounds. 	2
Total:		46

6. Independent work

№	Topic Title	Amount hours
1	Topic 2. Medicines that are used in anesthesia practice. <ol style="list-style-type: none"> 1. Neuroleptics, sedatives and tranquilizers. 2. Narcotic analgesics. 3. Antihistamines. 4. Holin-blocking facilities. 5. Gangliobloking means. 6. Muscle relaxants. 	6
2	Topic 2. Medicines that are used in anesthesia practice. <ol style="list-style-type: none"> 1. Adrenaline and adrenomimetic facilities. 2. Cardiovascular drugs. 3. Hormones and their analogues. 4. Anticholinesterase drugs. 5. Analeptics and psychostimulants facilities. 6. Diuretic drugs. 7. Enzymes and preparations with antiferment activity. 8. Plasmasubstitution and detoxification. 9. Preparations for parenteral nutrition 10. Coagulants and anticoagulants. 	8
3	Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems. <ol style="list-style-type: none"> 1. Basic constants of the body. 2. Data from laboratory studies. 3. Criteria for normal electrocardiograms. 4. Additional information. 	6
4	Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems. <ol style="list-style-type: none"> 1. Clinical interpretation of some laboratory studies. <ol style="list-style-type: none"> 1.1. Study of urine. 1.2. Changes in the urine with various diseases of the urinary system. 	6
5	Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems. <ol style="list-style-type: none"> 1. Clinical interpretation of some laboratory studies. <ol style="list-style-type: none"> 1.1. The study of blood. 1.2. Some blood diseases. 	6
6	Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems. <ol style="list-style-type: none"> 1. Clinical interpretation of some laboratory studies. <ol style="list-style-type: none"> 1.1. Investigation of cerebrospinal fluid. 1.2. Changes in cerebrospinal fluid in diseases of the central nervous system. 	6
7	Theme 3. Preoperative examination of animals, evaluation of the functional state of various organs and body systems. <ol style="list-style-type: none"> 1. Operational risk. 	6
8	Topic 4. Types of anesthesia. <ol style="list-style-type: none"> 1. The conductor and pathogenetic blockades. <ol style="list-style-type: none"> 1.1. Blockade of the sciatic nerve. 	10

	1.2. Anesthesia of the forelimb. 1.3. Anesthesia of the femoral nerve. 1.4. Vagosympathetic blockade. 1.5. Anesthesia of the auricle in a dog. 1.6. Blockages in the pelvis. 1.7. Anesthesia of the jaw area.	
9	Theme 8. Emergency anesthesiology 1. Anesthesia in obstetrics and gynecology. 1.1. Anesthesia in emergency cesarean section. 1.2. Anesthesia during surgery for obstetric and gynecological sepsis and pyometers.	6
10	Theme 9. Principles of intensive care. 1. Violation of the water-electrolyte balance. 1.1. Dehydration and its clinical manifestations. 1.2. Exchange of electrolytes and its disturbances. 1.3. Types of violations of water-electrolyte balance and their clinical manifestations.	8
11	Theme 9. Principles of intensive care. 1. Parenteral nutrition. 1.1. Calculation of nitrogen losses. 1.2. The needs of the organism in various components.	6
12	Topic 10. Techniques used in anesthesia practice. 1. Venesection. 2. Puncture of the pericardium. 3. Toilet trachea and bronchi. 4. Tracheostomy. 5. Decompression, drainage and washing of the stomach and intestines. 6. Tamponade of nasal passages.	8
13	Topic 11. Resuscitation and intensive care in small animals. 1. Emergency care for exogenous poisoning. 1.1. Emergency assistance for poisoning with certain medicines. 1.2. Emergency assistance for poisoning with heavy metals. 1.3. Emergency for poisoning by organochlorine pesticides.	8
Total:		90

8. Methods of teaching

1. Methods of learning by source of knowledge:

1.1. **Verbal** : a lecture, an explanation on the laboratory sessions and consultations, work with the textbook.

1.2. **Visible** : demonstrative - the study of macro preparations and histopreparations at the microscopic level, the use of tables, methodological aids.

1.3. **Practical** : conducting diagnostic techniques and methods of treatment in sick animals.

2. Methods of teaching by the nature of the logic of cognition.

2.1. **Analytical** study of clinical signs of the disease, diagnostic search algorithms.

2.2. **Methods of synthesis of** the diagnosis based on clinical signs, the appointment of reasonable treatment.

3. Methods of teaching on the nature and level of independent thinking activities of students.

3.2. **Partly-search (heuristic)** on the instructions of the teacher is the search for data on the Internet, literary sources.

3.3. **Research - the** study of the effectiveness of various methods of treating animals in the conduct of laboratory and practical exercises.

3.4. **Reproductive - the** application of the studied theoretical material in practice. Consultations explain the incomprehensible issues with the demonstration of tables, charts, formulas.

4. Active methods of training - use of technical means of teaching (multimedia lectures), disputes on problematic issues of any topic, verification of control works with self-assessment of knowledge and work on errors. Computer-assisted training and control tests or answers to questions suggested in the methodological manuals are used; students during the classes use lecture notes and methodical instructions developed by the teacher of the department.

5. Interactive teaching technologies - multimedia lectures and microfilm demonstration are used in laboratory classes, specific vague questions are analyzed and dialog training is conducted.

9. Methods of control

1. Rating control on a 100-point scale of ESKT estimation
2. Intermediate control during the semester (intermediate certification)
3. The level of knowledge is assessed when discussing issues raised at health facilities, interviews during LPH, the writing of thematic tests and the protection of laboratory work, and self-written essays on individual issues are evaluated.
4. The final assessment of the student's knowledge takes into account the level of academic work, the writing of control, oral answers, intermediate certification, the level of performance of independent work and its protection.

10. Distribution of points that students receive

Current testing and independent work								FROM R FROM	Together, the modules and the CPC	Certi ficati on	Amount
Module 1				Module 2							
Contained. module 1 - 18 points		Contained. Module 2 - 18 points		Contained. module 3 - 18 points		Contained. module 4 - 16 points					
T1	T2	T3	T4	T5	T6	T7	T8				
9	9	9	9	9	9	8	8	15	May 8 (70 + 15)	15	100

Scale of assessment: national and ECTS

The sum of points for all types of educational activity	Evaluation of ECTS	National scale rating	
		for the exam, course project (work), practice	for credit
90 - 100	A	excellent	enlisted
82-89	AT	OK	
75-81	FROM		
69-74	D		
60-68	E	satisfactorily	
35-59	FX	unsatisfactory with the possibility of re-compiling	not reckoned with the possibility of re-compiling
1-34	F	unsatisfactory with the obligatory re-study of the discipline	not reckoned with the obligatory re-study of the discipline