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Agrarian and Technological Institute

educational division (faculty/institute/academy) as higher education programme developer

## **COURSE SYLLABUS**

Anesthesiology, Resuscitation And Intensive Therapy

course title

#### **Recommended by the Didactic Council for the Education Field of:**

36.05.01 Veterinary

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

Veterinary

higher education programme profile/specialisation title

## 1. COURSE GOAL(s)

The goal of the course **«Anesthesiology, Resuscitation And Intensive Therapy»** is to master students' theoretical knowledge, practical skills and skills to ensure the safety of a sick animal at all stages of surgical treatment by preventing or reducing the body's response to injury, as well as restoring its impaired functions.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course "**Anesthesiology, Resuscitation And Intensive Therapy**" is aimed at creating the following competencies (parts of competencies) for students:

Competence code	Competence descriptor	Competence formation indicators (within this course)
PC-3	Ability to plan differential diagnosis activities for a patient.	<ul> <li>PC-3.1 Systematizes information about the patient's symptoms/syndromes, forming a set of preliminary diagnoses for further confirmation or refutation.</li> <li>PC-3.2 Uses an existing or develops a unique algorithm for differential diagnosis, taking into account the capabilities of the medical facility.</li> <li>PC-3.3 Uses information obtained from diagnostic activities to establish a final diagnosis (diagnoses) and to adjust the established diagnoses if necessary</li> </ul>
PC-7	Ability to select or develop a treatment plan for a patient based on the established diagnosis.	<ul> <li>PC-7.1 Able to select medications necessary for treating animals, guided by evidence-based medicine principles and considering the cumulative pharmacological effects of all prescribed medications on the organism.</li> <li>PC-7.2 Able to choose the optimal method of drug administration, calculate the dose and frequency of administration, and determine the duration of each course of treatment.</li> <li>PC-7.3 Able to select non-pharmacological, including physiotherapeutic, methods of influencing the sick animal's organism, contributing to its recovery, and apply them in treatment.</li> <li>PC-7.4 Able to develop a patient treatment plan, select criteria for monitoring its effectiveness, and</li> </ul>

Table 2.1. List of competences that students acquire through the course study

		determine alternatives to the treatment		
		plan if the chosen methods prove		
		ineffective.		
	Ability to use surgical methods	PC-9.1 Plans preoperative preparation, the		
	in the prevention, diagnosis,	course of surgical intervention, the		
PC-9	and treatment of animal	management of the early postoperative		
	diseases.	period, and the prevention of		
		complications.		

## **3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE**

The course refers to the core/variable/<u>elective</u>\* component of (B1) block of the higher educational programme curriculum.

\* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
	Ability to plan differential diagnosis activities for a patient.	Internal DiseasesObstetrics, GynecologyandAndrologyАкушерство,гинекологияиандрологияInternalDiseasesВнутренниенезаразные болезни	InternsmpsReconstructiveSurgeryРеконструктивно-восстановительнаяхирургияVeterinaryOphthalmologyВетеринарная
PC-3		General Surgery / Общая хирургия Private Surgery / Частная ветеринарная хирургия	офтальмология Behavioral Medicine / Поведенческая медицина
		Parasitology and Invasive Diseases / Паразитология и	Animal Dentistry / Стоматология животных Variable component

			/ Вариатириал	
		инвазионные облезни	/ Бариативная	
	Dermotelesse		компонента	
		Definatology /	Clinical Industrial	
		дерматология	Drastica	
		Cardialagu	Practice /	
		Cardiology /	Клиническая	
		Кардиология	производственная	
			практика	
		Endocrinology /	~~	
		Эндокринология	Clinical Internship	
		Oncology / Онкология	Industrial Research	
			Practice /	
		Neurology /	Производственно-	
		Неврология	исследовательская	
			практика	
		Nephrology /		
		Нефрология	Preparation for	
			Passing and Passing	
			the State Exam /	
			Подготовка к	
			сдаче и сдача	
			государственного	
			экзамена	
			Preparing and	
			Passing the State	
			Ехат / Подготовка	
			и сдача	
			государственного	
			экзамена	
			Design, Preparation	
			for Defense	
			Procedure and	
			Defense of the	
			Graduation Thesis /	
			Оформление	
			процедуре защиты	
			и защита	
			выпускной	
			квалификационнои	
	A 1 *1*/	۲	работы	
	Ability to select or	Base component /	Behavioral	
	develop a treatment plan	ьазовая компонента	Medicine /	
PC-7/	tor a patient based on the	<b>TT</b>	Поведенческая	
	established diagnosis.	Veterinary	медицина	
		Pharmacology /		

		Ветеринарная	Variable component	
		фармакология	/ Вариативная	
	фармакология		компонента	
	Toxicology /		Rominonomu	
		Токсикология	Clinical Industrial	
			Practice /	
		Dermatology /	Клиническая	
		Лерматология	произволственная	
			практика	
		Cardiology /		
		Кардиология	Clinical Internship	
		177	chine and the second	
		Endocrinology /	Industrial Research	
		Эндокринология	Practice /	
		• • •	Производственно-	
		Oncology / Онкология	исследовательская	
			практика	
		Neurology /	1	
		Неврология	Preparation for	
			Passing and Passing	
		Nephrology /	the State Exam /	
		Нефрология	Полготовка к	
			слаче и слача	
			государственного	
			экзамена	
			Preparing and	
			Passing the State	
			Ехат / Подготовка	
			и сдача	
			государственного	
			экзамена	
			Design, Preparation	
			for Defense	
			Procedure and	
			Defense of the	
			Graduation Thesis /	
			Оформление,	
			подготовка к	
			процедуре защиты	
			и защита	
			выпускной	
			квалификационной	
			работы	
	Ability to use surgical	Base component /	Variable component	
	methods in the	Базовая компонента	/ Вариативная	
PC-9	prevention, diagnosis,		компонента	
	and treatment of animal	Operative Surgery with		

diseases.	Topographic Anatomy /	Clinical Industrial
	Оперативная хирургия	Practice /
	с топографической	Клиническая
	анатомией	производственная
		практика
	Veterinary Assistant	1
	Skills / Навыки	Clinical Internship
	ассистента	· ·
	ветеринарного врача	Industrial Research
		Practice /
		Производственно-
		исследовательская
		практика
		Preparation for
		Passing and Passing
		Ine State Exam /
		подготовка к
		сдаче и сдача
		экзамена
		SKSdMelld
		Preparing and
		Passing the State
		Ехат / Подготовка
		и сдача
		государственного
		экзамена
		Design, Preparation
		for Defense
		Procedure and
		Defense of the
		Graduation Thesis /
		Оформление,
		подготовка к
		процедуре защиты
		и защита
		выпускной
		квалификационнои
		работы

# 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course <u>is</u> "Anesthesiology, Resuscitation And Intensive Therapy" is 2 credits.

Table 4.1. Types of academic activities during the periods of higher education programme mastering (*full-time training*)\*

Type of academic activities		Total academic	Semesters/training modules			
		hours	9	-	-	-
Contact academic hours		17	17	-	-	-
Including						
Lectures		-	-	-	-	-
Lab work		-	-	-	-	-
Seminars (workshops/tutorials)		17	17	-	-	-
Self-study	46	46	-	-	-	
Evaluation and assessment (exam/pass/fail		9	9	-	-	-
grading)						
academic		72	72	-	-	-
Course workload hours						
credits		2	2	-	-	-

## **5. COURSE CONTENTS**

Course module title	Course module contents (topics)	Academic activities types
Module 1. General	Topic 1.1. General concepts of	Lectures, Lab
concepts of	anesthesiology, intensive care and	work.
anesthesiology, intensive	intensive care.	
care and intensive care.	Topic 1.2. Legal issues.	Lectures, Lab work.
	Topic 1.3. Intraoperative patient monitoring.	Lectures, Lab work.
Module 2. Methods,	Topic 2.1. Types and stages of	Lectures, Lab
pharmacological means	anesthesia.	work.
and techniques of	Topic 2.2. Inhalation anesthesia.	Lectures, Lab
analgesia, premedication		work.
and anesthetic support.	Topic 2.3. Local anesthesia.	Lectures, Lab work.
	Topic 2.4. Infusion therapy.	Lectures, Lab work.
	Topic 2.5. Acute blood loss.	Lectures, Lab work.
	Topic 2.6. Cardiopulmonary	Lectures, Lab
	resuscitation.	work.
Module 3. Anesthesia of	Topic 3.1. Anesthesiology of diabetics.	Lectures, Lab
particularly difficult		work.
patients.	Topic 3.2. Anesthesiology in	Lectures, Lab
	ophthalmology.	work.

Table 5.1. Course contents and academic activities types

Topic 3.3. Anesthesiology of exotic		Lectures, Lab
	animals.	work.
	Topic 3.4. Anesthesiology in	Lectures, Lab
	neurology.	work.
	Topic 3.5. Physiology of CPP, IP.	Lectures, Lab
		work.

## 6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Seminar Room	A classroom for conducting seminar- type classes, group and individual consultations, ongoing assessments, and interim certification, equipped with specialized furniture and multimedia presentation equipment.	-
Self-studies	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to an electronic information and educational environment.	-

Table 6.1. Classroom equipment and technology support requirements

# 7. RESOURCES RECOMMENDED FOR COURSE STUDIES

Main readings:

- 1. Sakhno N. V., Vatnikov Yu. A., Yagnikov S. A., Shadskaya A.V., Shevchenko A. N., Tutkyshbai I. A., Andreeva O. N., Troshina N. I. Methodology of veterinary surgery training 2020.-184 p. https://e.lanbook.com/book/133910
- 2. Baymatov V.N. Workshop on pathological physiology: 2017.-352p. https://e.lanbook.com/book/94207
- 3. Berdnikova L. N. Biomedical fundamentals of life safety: A course of lectures 2019.-205 p. https://e.lanbook.com/book/149591
- 4. Khulelidze N. G. Nursing care in surgery. Course of lectures: textbook for SPO 2021.-360 p. https://e.lanbook.com/book/151195

## Additional Readings:

- 1. Klimovich S. S., Maskin S. S., Matyukhin V. V. Intestinal insufficiency syndrome in patients with acute abdominal surgical pathology 2019.-148p. https://e.lanbook.com/book/141150
- 2. Fundamentals of veterinary physiotherapy: Textbook 2020.-108 p. https://e.lanbook.com/book/155050
- 3. Pavlov S. A., Kusheev C. B., Lomboeva S. S. Veterinary dentistry: A textbook for classes in veterinary dentistry for students studying in the specialty 36.05.01 Veterinary Medicine 2018.-124p. https://e.lanbook.com/book/143174
- 4. Semenov B. S., Videnin V. N., Nechaev A. Yu., Kuznetsova T. S., Guseva V. A. Operative surgery in animals 2021.-704p. https://e.lanbook.com/book/162365

#### Internet sources

1. Electronic libraries (EL) of RUDN University and other institutions, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System (RUDN ELS) http://lib.rudn.ru/MegaPro/Web
- EL "University Library Online" <u>http://www.biblioclub.ru</u>
- EL "Yurayt" http://www.biblio-online.ru
- EL "Student Consultant" <u>www.studentlibrary.ru</u>
- EL "Lan" <u>http://e.lanbook.com/</u>
- EL "Trinity Bridge"

#### 2. Databases and search engines:

- electronic foundation of legal and normative-technical documentation <a href="http://docs.cntd.ru/">http://docs.cntd.ru/</a>

- Yandex search engine https://www.yandex.ru/
- Google search engine <u>https://www.google.ru/</u>
- Scopus abstract database http://www.elsevierscience.ru/products/scopus/

Training toolkit for self- studies to master the course \*:

- 1. The set of lectures on the course "Anesthesiology, Resuscitation And Intensive Therapy
- 2. Laboratory workshop on the course "Anesthesiology, Resuscitation And Intensive Therapy".

\* The training toolkit for self- studies to master the course is placed on the course page in the university telecommunication training and information system under the set procedure.

## 8. ASSESSMENT TOOLKIT AND GRADING SYSTEM\* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL UPON COURSE COMPLETION

The assessment toolkit and the grading system\* to evaluate the competences formation level (competences in part) upon the course study completion are specified in the Appendix to the course syllabus.

\* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

# **DEVELOPER:** Professor of the De

Professor of the Department of Veterinary Medicine		Vatnikov Yu.A.
Position, Basic curriculum	Signature	Full name.
HEAD OF EDUCATIONAL DEPARTMENT:		
Department of Veterinary Medicine		Vatnikov Yu.A.
Name Basic Curriculum	Signature	Full name.
HEAD OF HIGHER EDUCATION PROGRAMME:		
Director of the Department of Veterinary Medicine		Vatnikov Yu.A.
Position, Basic curriculum	Signature	Full name