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Информация о владельце:  
ФИО: Ястребов Олег Александрович  
Должность: Ректор  
Дата подписания: 21.05.2025 12:31:06  
Уникальный программный ключ:  
ca953a0120d891083f939673078ef1a989dae18a

**Federal State Autonomous Educational Institution of Higher Education  
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA  
RUDN University**

**Agrarian and Technological Institute**

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

**COURSE SYLLABUS**

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Veterinary Ophthalmology

course title

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

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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

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higher education programme profile/specialisation title

## 1. COURSE GOAL(s)

The aim of mastering the course "**Veterinary Ophthalmology**" is for students to master theoretical knowledge, practical skills and skills in the diagnosis, prevention and treatment of pathology of the visual analyzer, using knowledge of the basics of biomedical and clinical courses, taking into account the laws of the course of pathology of organs and body systems as a whole, to analyze the patterns of functioning of organs and systems in ophthalmic diseases and pathological processes.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

The implementation of the course "**Veterinary Ophthalmology**" is aimed at creating the following competencies (parts of competencies) for students:

*Table 2.1. List of competencies formed by students during the development of the course (results of the development of the course)*

Competence code	Competence descriptor	Competence formation indicators (within this course)
PC-3	Ability to plan activities for the differential diagnosis of diseases in a patient.	PC-3.1 Systematizes information about the symptoms/syndromes of the disease in the patient, forming a set of preliminary diagnoses for their further confirmation or refutation.
		PC-3.2 Uses an existing or creates a unique algorithm for differential diagnosis, taking into account the capabilities of the healthcare facility.
		PC-3.3 Uses information obtained from diagnostic procedures to establish a final diagnosis (diagnoses) and to adjust previously established diagnoses if necessary.
PC-5	Ability and readiness to plan and conduct the necessary types of instrumental diagnostics of the patient's condition.	PC-5.2 Selects the necessary and sufficient set of instrumental diagnostic methods to solve the assigned task.
		PC-5.3 Is able to conduct instrumental diagnostics of animal diseases.
		PC-5.4 Interprets the diagnostic results and uses them to solve the assigned task.
PC-9	Ability to use surgical methods during the prevention, diagnosis, and treatment of animal diseases.	PC-9.1 Selects the necessary method of surgical intervention, including, if necessary, methods of anesthesia.

## 3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course "**Veterinary Ophthalmology**" belongs to the part formed by the participants of educational relations of the block B1 of the Educational Program of Higher Education.

As part of the Educational Program of Higher Education, students also master other courses and /or practices that contribute to achieving the planned results of mastering the course "**Veterinary Ophthalmology**".

*Table 3.1. List of Higher Education Program components courses that contribute to expected learning outcomes*

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
PC-3	Ability to plan activities for the differential diagnosis of diseases in a patient.	Obstetrics, Gynecology and Andrology / Акушерство, гинекология и андрология	Behavioral Medicine / Поведенческая медицина
		Internal Diseases / Внутренние незаразные болезни	Animal Dentistry / Стоматология животных
		General Surgery / Общая хирургия	Variable component / Вариативная компонента
		Private Surgery / Частная ветеринарная хирургия	Clinical Industrial Practice / Клиническая производственная практика
		Parasitology and Invasive Diseases / Паразитология и инвазионные болезни	Clinical Internship
		Dermatology / Дерматология	Industrial Research Practice / Производственно-исследовательская практика
		Cardiology / Кардиология	
		Endocrinology / Эндокринология	Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена
		Oncology / Онкология	
		Neurology /	

		<p>Неврология</p> <p>Nephrology / Нефрология</p> <p>Anesthesiology, Resuscitation And Intensive Therapy / Анестезиология, реанимация и интенсивная терапия</p> <p>Reconstructive Surgery / Реконструктивно- восстановительная хирургия</p>	<p>Preparing and Passing the State Exam / Подготовка и сдача государственного экзамена</p> <p>Design, Preparation for Defense Procedure and Defense of the Graduation Thesis / Оформление, подготовка к процедуре защиты и защита выпускной квалификационной работы</p>
PC-5	Ability and readiness to plan and conduct the necessary types of instrumental diagnostics of the patient's condition.	<p>Instrumental Diagnostic Methods with Elements of Artificial Intelligence Technology / Инструментальные методы диагностики с элементами технологии искусственного интеллекта</p> <p>Dermatology / Дерматология</p> <p>Cardiology / Кардиология</p> <p>Endocrinology / Эндокринология</p> <p>Oncology / Онкология</p> <p>Neurology / Неврология</p> <p>Nephrology / Нефрология</p> <p>Reconstructive Surgery</p>	<p>Animal Dentistry / Стоматология животных</p> <p>Variable component / Вариативная компонента</p> <p>Clinical Industrial Practice / Клиническая производственная практика</p> <p>Clinical Internship</p> <p>Industrial Research Practice / Производственно- исследовательская практика</p> <p>Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена</p>

		/ Реконструктивно-восстановительная хирургия	<p>Preparing and Passing the State Exam / Подготовка и сдача государственного экзамена</p> <p>Design, Preparation for Defense Procedure and Defense of the Graduation Thesis / Оформление, подготовка к процедуре защиты и защита выпускной квалификационной работы</p>
PC-9	Ability to use surgical methods during the prevention, diagnosis, and treatment of animal diseases.	<p>Base component / Базовая компонента</p> <p>Operative Surgery with Topographic Anatomy / Оперативная хирургия с топографической анатомией</p> <p>Reconstructive Surgery / Реконструктивно-восстановительная хирургия</p>	<p>Animal Dentistry / Стоматология животных</p> <p>Variable component / Вариативная компонента</p> <p>Clinical Industrial Practice / Клиническая производственная практика</p> <p>Clinical Internship</p> <p>Industrial Research Practice / Производственно-исследовательская практика</p> <p>Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена</p>

			Preparing and Passing the State Exam / 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
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#### 4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the course "**Veterinary Ophthalmology**" is 2 credits.

*Table 4.1. Types of academic activities during the period of the HE program mastering for **full-time** study*

Types of academic activities		HOURS	Semesters			
			9	-	-	-
Contact academic hours		51	51	-	-	-
including						
Lectures		17	17	-	-	-
Lab work		34	34	-	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		1	1	-	-	-
Evaluation and assessment (exam/pass/fail grading)		20	20	-	-	-
Course workload	academic hours_	72	72	-	-	-
	credits	2	2	-	-	-

#### 5. COURSE CONTENTS

*Table 5.1 Content of the course (module) by type of academic work*

Modules	Content of the modules (topics)	Types of academic activities
Module 1. General concepts and methods of	Topic 1.1 General concepts of operative surgery, (surgical clinic, surgical	Lectures, Lab work.

operative surgery.	manipulations, surgical operation).	
	Topic 1.2 Fixation of animals, anesthesia, local anesthesia.	Lectures, Lab work.
	Topic 1.3 Surgical instruments.	Lectures, Lab work.
	Topic 1.4 Methods of asepsis and antiseptics in operative surgery.	Lectures, Lab work.
	Topic 1.5. Separation of tissues. Bleeding, types, methods of stopping.	Lectures, Lab work.
	Topic 1.6. General principles of surgical suture application.	Lectures, Lab work.
	Topic 1.7. Desmurgy.	Lectures, Lab work.
Module 2. Methods and features of surgical operations.	Topic 2.1. Operational access.	Lectures, Lab work.
	Topic 2.2. Operational techniques, types, methods, features.	Lectures, Lab work.
	Topic 2.3. Features of oncological operations. Principles of ablasy.	Lectures, Lab work.
	Topic 2.4. Connection of soft tissues. The final stage of the operation.	Lectures, Lab work.
	Topic 2.5. The connection of dense fabrics. Osteosynthesis.	Lectures, Lab work.

## 6. COURSE EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the course

<i>Classroom for Academic Activity Type</i>	<i>Equipping the classroom</i>	<b>Specialized educational/laboratory equipment, software and materials for the development of the course (if necessary)</b>
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	- <i>Ophthalmological instruments.</i>
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	- <i>Ophthalmological instruments.</i>

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.	-
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## 7. RESOURCES RECOMMENDED FOR COURSE STUDIES

### *Main readings:*

1. Shakurov M.Sh. Fundamentals of general veterinary surgery [Electronic resource] : Textbook / M.Sh. Shakurov. - 2nd ed., revised. - St. Petersburg : Publishing House "Lan", 2016. - 252 p. [http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\\_FindDoc&id=465067&idb=0](http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465067&idb=0)
2. Petrakov K.A. Salenko P.T. Paninsky S.M. Operative surgery with animal anatomy. -2nd ed. - Moscow: KolosS, 2013. - 453 p.
3. Semenov B. S., Videnin V. N., Nechaev A. Yu., Kuznetsova T. S., Guseva V. A. Operative surgery in animals 2021.-704 p. <https://e.lanbook.com/book/162365>

### *Additional Readings:*

1. Videnin V.N. Surgical treatment of abdominal wall defects in animals [Electronic resource] : Textbook / V.N. Videnin, B.S. Semenov. - St. Petersburg : Publishing house "Lan", 2015. - 224 p. [http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\\_FindDoc&id=465109&idb=0](http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465109&idb=0)
2. Local anesthesia and methods of novocaine therapy of animals [Electronic resource] : Educational and methodical manual / A.F. Sapozhnikov [et al.]. - St. Petersburg : Publishing House "Lan", 2011. - 176 p. [http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\\_FindDoc&id=465268&idb=0](http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465268&idb=0)
3. Semenov B.S. Practicum on operative surgery with the basics of topographic anatomy of domestic animals [Electronic resource] / B.S. Semenov, V.A. Ermolaev, S.V. Timofeev. - M. : KolosS, 2013. - 263 p. [http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\\_FindDoc&id=475874&idb=0](http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=475874&idb=0)

### *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" <http://www.biblioclub.ru>
- EL "Yurayt" <http://www.biblio-online.ru>
- EL "Student Consultant" [www.studentlibrary.ru](http://www.studentlibrary.ru)
- EL "Lan" <http://e.lanbook.com/>
- EL "Trinity Bridge"

### *2.Databases and search engines:*



- electronic foundation of legal and normative-technical documentation <http://docs.cntd.ru/>
- Yandex search engine [https:// www.yandex.ru/](https://www.yandex.ru/)
- Google search engine <https://www.google.ru/>
- Scopus abstract database <http://www.elsevierscience.ru/products/scopus/>

Educational and methodological materials for independent work of students during the development of the course/ module\*:

1. A course of lectures on the course "**Veterinary Ophthalmology**".
2. Laboratory workshop on the course "**Veterinary Ophthalmology**".

\* - The training toolkit and guidelines for the internship are placed on the internship 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 AS COURSE RESULTS**

The assessment toolkit and the grading system\* to evaluate the level of competences (competences in part) formation as the course results 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 Department of Veterinary Medicine

Position, Basic curriculum

Signature

Vatnikov Yu.A.

Full name.

### **HEAD OF EDUCATIONAL DEPARTMENT:**

Department of Veterinary Medicine

Name Basic Curriculum

Signature

Vatnikov Yu.A.

Full name.

### **HEAD OF HIGHER EDUCATION PROGRAMME:**

Director of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

Vatnikov Yu.A.

Full name