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ФИО: Ястребов Олег Александрович  
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**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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**Operative Surgery with Topographic Anatomy**

course title

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

**36.05.01 Veterinary**

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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

The goal of the course "**Operative surgery with topographic anatomy**" is to give future veterinarians theoretical knowledge, practical skills and skills in the technology of organizing and conducting surgical operations; theoretical knowledge, practical skills in choosing the optimal methods of surgical intervention and ways to prevent complications.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course "**Operative surgery with topographic anatomy**" is aimed at creating the following competencies (parts of competencies) for students:

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

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-1	Able to determine the biological status and normative clinical parameters of the organs and systems of animal organisms.	GPC-1.4 Possesses skills in sampling biological fluids and tissues for research, conducting laboratory tests, and interpreting research results.
PC-9	Ability to use methods of operative surgery in the prevention, diagnosis and treatment of animal diseases.	PC-9.1 Selects the necessary method of surgical intervention, including anesthesia methods if needed.
		PC-9.2 Plans preoperative preparation, the course of the surgical procedure, postoperative care, and prevention of complications.
		PC-9.3 Able to independently perform basic preventive, diagnostic, and therapeutic surgical procedures (including punctures, soft tissue necroectomy, tail amputation, castration of males and females, dehorning, diagnostic laparotomy, etc.).
		PC-9.4 Controls the outcome of the surgical intervention.

## 3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective\* 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*
GPC-1	Able to determine the biological status and normative clinical parameters of the organs and systems of animal organisms.	Clinical Diagnostics / Клиническая диагностика	<p>Laboratory Diagnostics with Elements of Artificial Intelligence Technology / Лабораторная диагностика с элементами технологии искусственного интеллекта</p> <p>Veterinary Assistant Skills / Навыки ассистента ветеринарного врача</p> <p>Base component / Базовая компонента</p> <p>Educational Practice / Учебная практика</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> <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 methods of operative surgery in the prevention, diagnosis and treatment of animal diseases.		<p>Veterinary Assistant Skills / Навыки ассистента ветеринарного врача</p> <p>Anesthesiology, Resuscitation And Intensive Therapy / Анестезиология, реанимация и интенсивная терапия</p> <p>Variable component / Вариативная компонента</p> <p>Clinical Industrial Practice / Клиническая производственная практика</p> <p>Clinical Internship</p> <p>Industrial Research Practice /</p>

			<p>Производственно-исследовательская практика</p> <p>Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена</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>
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#### 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "**Operative surgery with topographic anatomy**" is 4 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 hours	Semesters/training modules			
			6	-	-	-
Contact academic hours		68	68	-	-	-
including						
Lectures		17	17	-	-	-
Lab work		51	51	-	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		58	58	-	-	-
Evaluation and assessment (exam/pass/fail grading)		18	18	-	-	-
<b>Course workload</b>	academic hours	<b>144</b>	<b>144</b>	-	-	-

	credits	<b>4</b>	<b>4</b>	-	-	-
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## 5. COURSE CONTENTS

*Table 5.1. Course contents and academic activities types*

Course module title	Course module contents (topics)	Academic activities types
Module 1. General concepts and methods of operative surgery.	Topic 1.1 General concepts of operative surgery, (surgical clinic, surgical manipulations, surgical operation).	Lectures, Lab work.
	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. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

*Table 6.1. Classroom equipment and technology support requirements*

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
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>surgical instruments</i>
LaboratoryLab workLaboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	<i>surgical 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.	-

## 7. RESOURCES RECOMMENDED FOR COURSE STUDIES

### *Main readings:*

1. Shakurov M.S. Fundamentals of general veterinary surgery [Electronic resource] : Textbook / M.S. 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/>

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

1. The set of lectures on the course "**Operative surgery with topographic anatomy**".
2. Laboratory workshop on the course "**Operative surgery with topographic anatomy**".

\* 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).

## **DEVELOPERS:**



Assistant of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

Rodionova N.Yu.

Full name.

Senior Lecturer of the Department of Veterinary  
Medicine

Position, Basic curriculum

Signature

Troshina N.I.

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