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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**

**Operative surgery with topographic anatomy**

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course title

**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:**

**36.05.01 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 indicators of animal organs and systems	GPC-1.4 Knows how to take samples of biological fluids and tissues for research, how to perform laboratory research, interpretation of 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 methods of anesthesia if necessary.
		PC-9.2 Plans preoperative preparation, the course of surgical intervention, the management of the early postoperative period, and the prevention of complications.
		PC-9.3 Able to independently perform basic preventive, diagnostic and therapeutic surgical interventions (including punctures, soft tissue necrectomies, tail amputations, castration of males and females, dehorning, diagnostic laparotomies, etc.)
		PC-9.4 Controls the result of 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*

<b>Competence code</b>	<b>Competence descriptor</b>	<b>Previous courses/modules, internships*</b>	<b>Subsequent courses/modules, internships*</b>
GPC-1	Able to determine the biological status and normative clinical indicators of animal organs and systems	Clinical diagnostics	Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Study practice Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam
PC-9	Ability to use methods of operative surgery in the prevention, diagnosis and treatment of animal diseases.		Anesthesiology, resuscitation and intensive care Reconstructive surgery Veterinary ophthalmology Animal Dentistry Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam

#### **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	72	72	-	-	-
including					
Lectures	18	18	-	-	-
Lab work	54	54	-	-	-
Seminars (workshops/tutorials)	-	-	-	-	-
Self-study	62	62	-	-	-
Evaluation and assessment (exam/pass/fail grading)	10	10	-	-	-
<b>Course workload</b>	academic hours	<b>144</b>	<b>144</b>	-	-
	credits	<b>4</b>	<b>4</b>	-	-

## 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	Lectures, Lab

	fabrics. Osteosynthesis.	work.
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## 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>
Laboratory work	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