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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**

Veterinary pharmacology

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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:**

Veterinary

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higher education programme profile/specialisation title

## 1. GOALS AND OBJECTIVES OF THE COURSE

The aim of the mastering the course "**Veterinary pharmacology**" is to provide students with the necessary knowledge about the properties, action and use of medicinal substances for therapeutic and prophylactic purposes, as well as for the stimulation and pharmacological regulation of physiological processes in the body of animals.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

The implementation of the course "**Veterinary pharmacology**" 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 discipline)*

Competence code	Competence descriptor	Indicators of competence accomplishment (within the discipline)
PC-7	Ability to choose or develop a treatment plan for a patient based on the diagnosis	PC-7.1 Is able to select medications necessary to treat animals based on the principles of evidence-based medicine, taking into account the combined pharmacological effects of all prescribed medications on the body.
		PC-7.2 Able to choose the optimal method of drug administration, calculate the dose and frequency of administration, and the duration of each drug course

## 3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course "**Veterinary pharmacology**" refers to the mandatory part of block B1 of the Educational Program of Higher Education.

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

Table 3.1. List of Higher Education Program components/disciplines that contribute to expected learning outcomes

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
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PC-7	Ability to choose or develop a treatment plan for a patient based on the diagnosis		Toxicology Dermatology Cardiology Endocrinology Nephrology Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam
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#### 4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the course "Veterinary pharmacology" is 8 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				
			5	6	-	-	
Contact academic hours		136	68	68	-	-	
including							
Lectures		34	17	17	-	-	
Lab work		102	51	51	-	-	
Seminars (workshops/tutorials)		-	-	-	-	-	
Self-study		104	82	22	-	-	
Evaluation and assessment (exam/pass/fail grading)		48	30	18	-	-	
Course workload		Academic hour	<b>288</b>	<b>180</b>	<b>108</b>	-	-
		Credit unit	<b>8</b>	<b>5</b>	<b>3</b>	-	-

#### 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
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Module 1. General pharmacology. General recipe.	Topic 1.1. General pharmacology.	Lectures, Lab work
	Topic 1.2. General recipe.	Lectures, Lab work
Module 2. Funds acting on the nervous system.	Topic 2.1. Remedies acting on afferent and efferent innervation.	Lectures, Lab work
	Topic 2.2. Substances acting on the central nervous system.	Lectures, Lab work
Module 3. Substances that regulate the functions of individual organs and systems.	Topic 3.1. Substances affecting respiratory and digestive function.	Lectures, Lab work
	Topic 3.2. Substances affecting the excretory function of the kidneys, cardiovascular system, hemostasis, hematopoiesis.	Lectures, Lab work
Module 4. Substances that primarily affect metabolic processes.	Topic 4.1. Hormones and their analogues.	Lectures, Lab work
	Topic 4.2. Vitamins and enzymes.	Lectures, Lab work
	Topic 4.3. Mineral substances.	Lectures, Lab work
Module 5. Means, correcting the immune status and productivity of animals.	Topic 5.1. Remedies affecting immune processes.	Lectures, Lab work
	Topic 5.2. Means correcting the immune status and productivity of animals.	Lectures, Lab work
Module 6. Antimicrobial, antiparasitic, antitumor agents.	Topic 6.1. Disinfectants and antiseptics.	Lectures, Lab work
	Topic 6.2. Chemotherapeutic agents.	Lectures, Lab work
	Topic 6.3. Rodenticides.	Lectures, Lab work

## 6. COURSE EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

*Table 6.1. Material and technical support of the discipline*

<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>
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Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	-
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and 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.	-

## 7. RESOURCES RECOMMENDED FOR COURSE STUDIES

### *Main readings:*

1. Circulation and quality control of medicines for veterinary use in the Russian Federation: tutorial / A. Vatnikov, MI Shopinskaya, SG Drukovsky, EV Kulikov. - Electronic text data. - Moscow: PFUR, 2021. - 37 c.: [http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\\_FindDoc&id=494768&idb=0](http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=494768&idb=0)
2. V., Kuznetsov S. V., Sakhno NV, Kapustin R. F. Veterinary pharmacology. Dictionary-Reference Book: a textbook for universities 2020.-136s <https://e.lanbook.com/book/152613>.
3. Lavrinenkova A.N. Course of lectures on veterinary pharmacology 2018.-104s <https://e.lanbook.com/book/133070>

### *Additional Readings:*

1. Sokolov V.D. Pharmacology - St. Petersburg: Lan' Publisher, 2013. - 576c. <https://e.lanbook.com/book/10255>
2. Samorodova I. M. Veterinary pharmacology and formulation. Workshop: textbook for universities / IM Samorodova, MI Rabinovich. - 7th ed. amended and supplemented - M.: Publishing house Yurite, 2018. - 278 c.
3. Nabiev FG, Akhmadeev RN Modern veterinary medicines - St. Petersburg: Lan' Publisher, 2011. - 816c. <https://e.lanbook.com/book/1547>
4. Pharmacology / Kharkevich DA, - 10th ed. revised, revised and additional ed. - M.: GEOTAR-MED, 2010. - 752 c.
5. Donald K. Plumb Pharmacological preparations in veterinary medicine. - Moscow: Aquarium-Print, 2016. - 1060 c.
6. Fundamentals of pharmacology with prescription. Textbook / Astafiev V.A., Edited by Astafiev V.A. - Moscow: Knorus, 2015. - 595 c.

### *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 discipline/ module\*:

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

\* - 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).

### **DEVELOPERS:**

Associate Professor, Department of Veterinary Medicine

Должность, БУП

Подпись

Kharlitskaya E.V.

Фамилия И.О.

### **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

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Position, Basic curriculum

Signature

Vatnikov Yu.A.

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Full name