**Federal State Autonomous Educational Institution of Higher Education**
**Peoples' Friendship University of Russia named after Patrice Lumumba**
**RUDN University**

**Agrarian and Technological Institute**
educational division (faculty/institute/academy) as higher education programme developer

# COURSE SYLLABUS

## Veterinary Pharmacology
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

**2026**

## 1. COURSE GOAL(s)

The goal of 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

Mastering the course (module) «**Veterinary Pharmacology»** is aimed at the development of the following competences /competences in part:

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

| **Competence code** | **Competence descriptor** | **Competence formation indicators** (within this course) |
|---|---|---|
| PC-7 | Ability to select or develop a treatment plan for a patient based on the established diagnosis. | PC-7.1. Selects necessary veterinary medicinal products according to evidence-based medicine principles and pharmacological effects. |
| | | PC-7.2. Determines optimal route of administration, dosage, frequency and duration of treatment. |

## 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.

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*** | **Subsequent courses/modules*** |
|---|---|---|---|
| PC-7 | Ability to select or develop a treatment plan for a patient based on the established diagnosis. | - | Dermatology<br>Cardiology<br>Endocrinology<br>Oncology<br>Neurology<br>Nephrology<br>Anesthesiology, Resuscitation And Intensive Therapy<br>Behavioral Medicine |

## 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is 8 credits (288 academic hours).

*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 | | | |
|---|---|---|---|---|---|---|
| | | | **5** | **6** | - | - |
| *Contact academic hours* | | 136 | 68 | 68 | - | - |
| including: | | | | | | |
| Lectures (LC) | | 34 | 17 | 17 | - | - |
| Lab work (LW) | | 102 | 51 | 51 | - | - |
| Seminars (workshops/tutorials) (S) | | - | - | - | - | - |
| *Self-studies* | | 116 | 94 | 22 | - | - |
| *Evaluation and assessment (exam/passing/failing grade)* | | 36 | 18 | 18 | - | - |
| **Course workload** | academic hours_ | **288** | **180** | **108** | - | - |
| | credits | **8** | **5** | **3** | - | - |

## 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 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. 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 | A lecture hall for lecture-type classes, equipped with a set of specialised furniture; board (screen) and technical means of multimedia presentations. | |
| Lab work | A classroom for laboratory work, individual consultations, current and mid-term assessment; equipped with a set of specialised furniture and machinery. | |
| Self-studies | A classroom for independent work of students (can be used for seminars and consultations), equipped with a set of specialised furniture and computers with access to the electronic information and educational environment. | |

## 7. RESOURCES RECOMMENDED FOR COURSE STUDY

*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
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
- 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/
- 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 «**Veterinary pharmacology»**
2. The laboratory workshop (if any) on the course «**Veterinary pharmacology»**

* 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.

**DEVELOPERS:**

| Associate Professor, Department of Veterinary Medicine | | Kharlitskaya E.V. |
|---|---|---|
| Должность, БУП | Подпись | Фамилия И.О. |

**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 |