

Документ подписан простой электронной подписью
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**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

Toxicology

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

1. COURSE GOAL(s)

The goal of the course «**Toxicology**» is to study the effect of toxic substances of anthropogenic and natural origin on the organism of agricultural, wild and game animals, fish and bees, on their productivity, reproductive function and sanitary quality of livestock products.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) «**Toxicology**» 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.	Veterinary Pharmacology	Dermatology Cardiology Endocrinology Oncology Neurology Nephrology Anesthesiology, Resuscitation And Intensive Therapy Behavioral Medicine

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is «Toxicology» credits (108 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			
		6	-	-	-
Contact academic hours	51	51	-	-	-
including:					
Lectures (LC)	17	17	-	-	-
Lab work (LW)	34	34	-	-	-
Seminars (workshops/tutorials) (S)	-	-	-	-	-
Self-studies	48	48	-	-	-
Evaluation and assessment (exam/passing/failing grade)	9	9	-	-	-
Course workload	academic hours	108	108	-	-
	credits	3	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 toxicology.	Topic 1: General toxicology	Lectures, Lab work.
Module 2. Private toxicology.	Topic 2.1 Chemical toxicoses.	Lectures, Lab work.
	Topic 2.2 Feed toxicosis.	Lectures, Lab work.
	Topic 2.3 Phytotoxicoses.	Lectures, Lab work.
	Topic 2.4 Mycotoxicoses.	Lectures, Lab work.
	Topic 2.5 Toxicosis with poisons of animal origin.	Lectures, Lab work.
	Topic 2.6 Poisoning by toxic substances.	Lectures, Lab work.
	Topic 2.7 Poisoning Polychlorinated biphenyls and Polychlorinated biphenyls.	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	

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
	(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. Kharlitskaya E.V., Vatnikov Yu.A. Educational practice in pharmacology and toxicology. Educational and methodological recommendations M., "ZooVetKniga", 2013, pp.1-32.
2. Korolev B.A., Skosyrskikh L.N., Lieberman E.L. Workshop on Toxicology 2019.- 384p. <https://e.lanbook.com/book/125440>
3. Izvekova T. V., Gushchin A. A., Kobeleva N. A. Fundamentals of toxicology 2022.- 152p. <https://e.lanbook.com/book/200405>

Additional readings:

1. Zhulenko V.N., Rabinovich M.I., Talanov G.A., Veterinary toxicology. - M.: KolosS, 2012. – 384 p.
2. Korolev B. A. Practicum on toxicology [Text] : Textbook / B.A. Korolev, L.N. Skosyrskikh. - St. Petersburg : Lan, 2016. - 384 p.
3. Toxicological ecology : textbook / A.V. Miftakhutdinov. - St. Petersburg : Publishing House "Lan", 2018. - 308 p
4. Belyavsky V.N., Ushakov S.S. VETERINARY TOXICOLOGY. - Grodno: GGAU, 2010. - 24 p.
5. Gusynin I.A. Toxicology of poisonous plants – M. : Kolos, 2008. - 624 p.
6. Modern veterinary medicines / Nabiev F.G., Akhmadeev R.N., - 2nd ed., reprint ed. - St. Petersburg: Lan, 2011. - 816 p.
7. Roder J. Veterinary toxicology. - M.: Aquarium-Print, 2008. - 416 p.

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.elsevier.com/locate/scopus/>

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

1. The set of lectures on the course «**Toxicology**»
2. The laboratory workshop (if any).on the course «**Toxicology**»

* 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.

DEVELOPER:

Associate Professor of the Department of Veterinary
Medicine

Position, Basic curriculum

Signature

Kharlitskaya E.V.

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