

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

Cardiology

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 "**Cardiology**" is to familiarize students with the theoretical background, terminology, and concepts of the discipline, master the methods of detection and differential diagnosis of diseases of the cardiovascular system of animals, as well as the main treatment regimens and methods of prevention of cardiac diseases.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "**Cardiology**" 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-3	Ability to plan differential diagnosis activities for a patient.	PC-3.1 Systematizes information on symptoms/syndromes of the disease in the patient, forming a set of preliminary diagnoses for their further confirmation or refutation.
		PC-3.2 Uses an existing or develops a unique algorithm for differential diagnosis, taking into account the capabilities of the medical institution.
		PC-3.3 Uses the information obtained from diagnostic procedures to establish a final diagnosis (or diagnoses) and to adjust the established diagnoses if necessary.
PC-5	Ability and readiness to plan and conduct necessary types of instrumental diagnostics of the patient's condition.	PC-5.2 Selects the necessary and sufficient set of instrumental diagnostic methods to solve the assigned task.
		PC-5.3 Is able to perform instrumental diagnostics of animal diseases.
		PC-5.4 Interprets diagnostic results and uses them to solve the assigned task.
PC-7	Ability to choose or develop a treatment plan for a patient based on the established diagnosis.	PC-7.1 Is able to select medications necessary for treating animals, guided by evidence-based medicine principles and considering the combined pharmacological effects of all prescribed drugs on the organism.
		PC-7.2 Is able to choose the optimal method of drug administration, calculate the dose and frequency of administration, and determine the duration of each drug course.
		PC-7.3 Is able to select non-drug, including physiotherapeutic, methods of influence on the organism of the sick animal, which contribute to its recovery, and apply them in treatment.
		PC-7.4 Is able to develop a patient treatment

Competence code	Competence descriptor	Competence formation indicators (within this course)
		plan, select criteria for monitoring its effectiveness, and determine alternative treatment plans if the initially chosen treatment methods are ineffective.

3.COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course "**Cardiology**" refers to the core 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-3	Ability to plan differential diagnosis activities for a patient.	Obstetrics, Gynecology and Andrology Internal Diseases General Surgery Private Surgery Parasitology and Invasive Diseases Dermatology	Endocrinology Oncology Neurology Nephrology Anesthesiology, Resuscitation And Intensive Therapy Reconstructive Surgery Veterinary Ophthalmology Behavioral Medicine Animal Dentistry Clinical Industrial Practice Clinical Internship Industrial Research Practice
PC-5	Ability and readiness to plan and conduct necessary types of instrumental diagnostics of the patient's condition.	Instrumental Diagnostic Methods with Elements of Artificial Inteligence Technology Dermatology	Endocrinology Oncology Neurology Nephrology Reconstructive Surgery Veterinary Ophthalmology Animal Dentistry Clinical Industrial Practice Clinical Internship Industrial Research Practice
PC-7	Ability to choose or develop a treatment plan for a patient based on the established diagnosis.	Veterinary Pharmacology Toxicology Dermatology	Endocrinology Oncology Neurology Nephrology Anesthesiology,

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
			Resuscitation And Intensive Therapy Behavioral Medicine Clinical Industrial Practice Clinical Internship Industrial Research Practice

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "Cardiology" is 2 credits (72 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			
		9	-	-	-
Contact academic hours	51	51	-	-	-
including:					
Lectures (LC)	17	17	-	-	-
Lab work (LW)	34	34	-	-	-
Seminars (workshops/tutorials) (S)	-	-	-	-	-
Self-studies	1	1	-	-	-
Evaluation and assessment (exam/ passing/failing grade)	20	20	-	-	-
Course workload	academic hours	72	72	-	-
	credits	2	2	-	-

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Module 1. Introduction to Cardiology	Topic 1.1 Blood supply to the heart, research of the cardiovascular system.	LC, LW
	Topic 1.2 Examination, auscultation, percussion, palpation, X-ray examinations.	LC, LW
Module 2. Diagnosis of diseases of the cardiovascular system	Topic 2.1. Acute heart failure, ECG recording technique.	LC, LW
	Topic 2.2. Echocardiography, ultrasound cardiography, phonocardiography.	LC, LW

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.	-

* The premises for students' self-studies are subject to **MANDATORY** mention

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

1. Cardiology of cats / E. Kot, K. M. Mers, K.A. McDonald, M.M. Sleeper; translation and scientific editorial by A.V. Kamenev, P.A. Kuznetsov. - Moscow : Scientific Library, 2018. - 578 p. : ill. - ISBN 978-5-6040896-5-1
2. Clinical diagnostics of internal non-infectious animal diseases / B.V. Usha, I.M. Belyakov, R.P. Pushkarev. - Electronic text data. - St. Petersburg : Quadro, 2020. - 487 p. : ill. - (Textbooks and manuals for higher educational institutions). - ISBN 978-5-906371-03-4

Additional Readings:

3. Infectious diseases of animals : a textbook for universities / Edited by A.A.Kudryashov, A.V.Svyatkovsky. - St. Petersburg: Lan, 2007. - 608 p. : ill. - (Veterinary medicine). - ISBN 978-5-8114-0710-1
4. Pathological physiology of animals: textbook / S.I. Lyutinsky. - 2nd ed., ispr. and add. - M. : KolosS, 2005. - 496 p. : ill. - (Textbooks and manuals for students of higher educational institutions). - ISBN 5-9532-0017'S

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 "**Cardiology**"
2. The laboratory workshop (if any).on the course "**Cardiology**"

* 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:

Professor of the Department of Veterinary Medicine

Vatnikov Yu.A.

position, department

name and surname

HEAD OF EDUCATIONAL DEPARTMENT:

Department of Veterinary Medicine

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HEAD

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