

Документ подписан простой электронной подписью
Информация о владельце:
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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

Pathologic Physiology

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 «**Pathologic Physiology**» is to master the basics of the laws of the development of pathological processes; concepts about the essence of life, health, disease; to study typical pathological processes: inflammation, tumors, fever, hypoxia, starvation, etc.; to reveal the issues of pathological physiology of organs and systems.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) «**Pathologic Physiology**» intends to train and guide students to achieve the development of 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)
GPC-1	Ability to determine the biological status and normative clinical indicators of organs and systems of the animal organism.	GPC-1.2 Is able to predict expected disturbances of biological status when the development of diseases is suspected;
GPC-6	Able to analyze, identify, and assess the risk of occurrence and spread of diseases.	GPC-6.1 Possesses knowledge in the field of etiology and pathogenesis of diseases in animals of different species;

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*
GPC-1	Ability to determine the biological status and normative clinical indicators of organs and systems of the animal organism.	-	Clinical Industrial Practice Clinical Internship Industrial Research Practice
GPC-6	Able to analyze, identify, and assess the risk of occurrence and spread of diseases.	Animal Health and Welfare	Epidemiology and Infectious Diseases Veterinary Genetics

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
			Animal Health and Welfare Clinical Industrial Practice Clinical Internship Industrial Research Practice

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is «**Pathologic Physiology**» 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				
		4	5	-	-	
Contact academic hours	136	68	68	-	-	
including:						
Lectures (LC)	34	17	17	-	-	
Lab work (LW)	102	51	51	-	-	
Seminars (workshops/tutorials) (S)	-	-	-	-	-	
Self-studies	161	103	58	-	-	
Evaluation and assessment (exam/passing/failing grade)	27	9	18	-	-	
Course workload	academic hours	324	180	144	-	-
	credits	9	5	4	-	-

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 pathological physiology	Topic 1. Pathological physiology as a fundamental science and academic course.	Lectures, Lab work.
	Topic 1.1 General nosology.	Lectures, Lab work.
	Topic 1.2 General etiology.	Lectures, Lab work.
	Topic 1.3 General pathogenesis.	Lectures, Lab work.
	Topic 1.4 The effect of pathogenic environmental factors.	Lectures, Lab work.
	Topic 1.5 Urgent conditions.	Lectures, Lab work.

	Topic 1.6 Reactivity and resistance of the body.	Lectures, work.	Lab
	Topic 1.7 Disorders of local blood and lymph circulation.	Lectures, work.	Lab
	Topic 1.8 Inflammation.	Lectures, work.	Lab
	Topic 1.9 Disorders of thermoregulation of the body. Fevers.	Lectures, work.	Lab
	Topic 1.10 Pathological physiology of metabolic and energy disorders.	Lectures, work.	Lab
	Topic 1.11 Tumor growth.	Lectures, work.	Lab
Module 2. Private pathological physiology.	Topic 2. Blood pathophysiology.	Lectures, work.	Lab
	Topic 2.1 Pathophysiology of the cardiovascular system.	Lectures, work.	Lab
	Topic 2.2 Pathophysiology of the respiratory system.	Lectures, work.	Lab
	Topic 2.3 Pathophysiology of the excretory system (kidneys).	Lectures, work.	Lab
	Topic 2.4 Pathophysiology of digestion.	Lectures, work.	Lab
	Topic 2.5 Pathophysiology of the liver, pancreas.	Lectures, work.	Lab
	Topic 2.6 Pathophysiology of the endocrine system.	Lectures, work.	Lab
	Topic 2.7 Pathophysiology of the immune system.	Lectures, work.	Lab
	Topic 2.8 Pathophysiology of the nervous system.	Lectures, work.	Lab

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.	<ul style="list-style-type: none"> - Information stands. - Wet anatomical preparations. - Micro-preparations. - Biological microscopes. - Digital camera for the microscope.
Lab work	A classroom for laboratory work, individual consultations, current and mid-term assessment; equipped with a set of specialised	<ul style="list-style-type: none"> - Information stands. - Wet anatomical preparations.

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
	furniture and machinery.	<ul style="list-style-type: none"> - <i>Micro-preparations.</i> - <i>Biological microscopes.</i> - <i>Digital camera for the microscope.</i>
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. Pathological physiology and pathological anatomy of animals [Electronic resource] : Textbook / A.V. Zharov [et al.]; Edited by A.V. Zharov. - 4th ed., revised. - St. Petersburg : Publishing House "Lan", 2018. - 416 p. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-1534-2. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=464906&idb=0
2. Baymatov V.N. Workshop on pathological physiology + CD [Electronic resource] : Textbook / V.N. Baymatov. - 2nd ed., revised. - St. Petersburg : Publishing House "Lan", 2017. - 352 p. - (Textbooks for universities. Special literature).- ISBN 978-5-8114-1443-7. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=464947&idb=0

Additional readings:

1. Savinkov, A.V. Pathological physiology: textbook / A.V. Savinkov, V.M. Meshkov. — Samara : SamGAU, 2018. — 188 p. — ISBN 978-5-88575-519-1. — Text : electronic // Electronic library system "Lan" : [website]. — URL: <https://e.lanbook.com/book/111866>
2. Bogdanov, A.V., Golubenko Yu.V., Pathological physiology and pathological anatomy of animals. - St. Petersburg: Lan, 2014. - 416 p.
3. Lyutinsky S.I. Pathological physiology of animals. - 2nd ed. - St. Petersburg: KolosS, 2013. - 496 p.
4. Vasiliev, Yu.G. Tests on pathological physiology: an educational and methodological manual / Yu.G. Vasiliev, E.I. Troshin, D.S. Berestov. — Saint Petersburg : Lan, 2015. — 400 p. — ISBN 978-5-8114-1810-7. — Text : electronic // Electronic library system "Lan" : [website]. — URL: <https://e.lanbook.com/book/58163>

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 «**Pathologic Physiology**»
2. The laboratory workshop (if any).on the course «**Pathologic Physiology**»
3. The guidelines for writing a course paper / project (if any) on the course.

* 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

Подпись

Kulikov E.V.

Full name.

Associate Professor of the Department of Veterinary
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Position, Basic curriculum

Signature

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HEAD OF EDUCATIONAL DEPARTMENT:

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HEAD OF

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