

Документ подписан простой электронной подписью

Информация о владельце:

ФИО: Ястребов Олег Александрович

Должность: Ректор

Дата подписания: 14.07.2025 11:57:52

Уникальный программный ключ:

ca953a0120d891083f939673078ef1a980daa18a

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

**Agrarian and Technological Institute**

(name of the main educational unit (MEU) – developer of the program)

**Department of Veterinary Medicine**

(name of the basic educational unit (BEU) – developer of the program)

## **WORKING PROGRAM OF THE DISCIPLINE**

**Animal pathology, morphology, physiology, pharmacology and toxicology**

(name of discipline/module)

Scientific specialty:

**4.2.1. Animal pathology, morphology, physiology, pharmacology and toxicology**

(code and name of scientific specialty)

The discipline is mastered within the framework of the postgraduate program:

**Animal pathology, morphology, physiology, pharmacology and toxicology**

(name of the program for training scientific and scientific-pedagogical personnel)

### 1. THE GOAL OF MASTERING THE DISCIPLINE

The purpose of mastering the discipline "Animal pathology, morphology, physiology, pharmacology and toxicology" is to prepare for the candidate exam in specialty 4.2.1. Animal pathology, morphology, physiology, pharmacology and toxicology.

### 2. REQUIREMENTS TO THE RESULTS OF MASTERING THE DISCIPLINE

As a result of mastering the discipline "Animal pathology, morphology, physiology, pharmacology and toxicology", the postgraduate student must:

**Know:**

general pathological anatomy;  
morphological manifestations of metabolic disorders in tissues;  
disorders of blood and lymph circulation and tissue fluid exchange;  
adaptive, compensatory (restorative) and tumor processes;  
private (special pathological) anatomy;  
morphogenesis, pathomorphology and pathomorphological diagnostics of infectious and non-infectious diseases.

**Be able to:**

correctly collect, record and send pathological material for laboratory testing;  
apply basic methods of pathohistological techniques and diagnostics of animal diseases;  
carry out comprehensive differential pathomorphological diagnostics of animal diseases during autopsies, as well as during pathohistological studies.

**Own:**

specific theoretical knowledge in the discipline;  
modern methods and techniques for studying the structural organization of biological objects at all its levels;  
technique of pathological anatomical dissection of corpses of animals of various species;  
modern information and innovative technologies.

### 3. SCOPE OF THE DISCIPLINE AND TYPES OF STUDY WORK

The total workload of the discipline "Animal pathology, morphology, physiology, pharmacology and toxicology" is 4 credit units (144 academic hours).

Type of academic work		Total, ac . h.	Semester 2
<i>Contact work</i>		60	60
including:			
Lectures (LC)		30	30
Laboratory work (LW)		-	-
Practical/seminar classes (SZ)		30	30
<i>Independent work of students</i>		48	48
<i>Control (exam)</i>		36	36
General complexity of the discipline	ak . h.	144	144
	. unit	4	4

### 4. CONTENT OF THE DISCIPLINE

Name of the discipline section	Section Contents (Topics)	Type of academic work
Section 1. General pathology	Topic 1.1. Thanatology	LK, SZ
	Topic 1.2. Pathohistotechnics	LK, SZ
	Topic 1.3. Alteration	LK, SZ
	Topic 1.4. Blood and lymph circulation disorders	LK, SZ
	Topic 1.5. Inflammation. Immunomorphology, immunopathology	LK, SZ

	Topic 1.6. Adaptive and compensatory reactions. Tumor growth	LK, SZ
Section 2. Private pathology	Topic 2.1. Blood pathophysiology. Cardiovascular pathophysiology	LK, SZ
	Topic 2.2. Pathophysiology of the respiratory system.	LK, SZ
	Topic 2.3. Pathophysiology of the excretory system (kidneys).	LK, SZ
	Topic 2.4. Pathophysiology of digestion. Pathophysiology of the liver, pancreas	LZ, SZ
	Topic 2.5. Pathophysiology of the endocrine system.	LZ, SZ
	Topic 2.6. Pathophysiology of the immune system.	LZ, SZ
	Topic 2.7. Pathophysiology of the nervous system	LZ, SZ

## 5. LOGISTIC AND TECHNICAL SUPPORT OF DISCIPLINE

Audience type	Equipping the auditorium	Specialized educational/laboratory equipment, software and materials
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means for multimedia presentations.	No
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, ongoing monitoring and midterm assessment, equipped with a set of specialized furniture and technical means for multimedia presentations	No
For independent work of students	A classroom for independent work of students (can be used for conducting seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIS	No

## 6. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

### *Main literature:*

Zharov A.V. , Shishkov V.P., Zhakov M.S., et al. Pathological anatomy of farm animals / Edited by V.P. Shishkov and A.V. Zharov: Textbook for universities. - M.: Kolos, 2013.- 536 p. URL: <http://lib.rudn.ru/ProtectedView/Book/ViewBook/5665>

Zharov, A. V. Pathological physiology and pathological anatomy of animals: Textbook / A. V. Zharov [et al.]; Ed. A. V. Zharov. - 2nd ed. revised and add. - St. Petersburg : Lan, 2014. - 416 p. URL : <http://lib.rudn.ru/ProtectedView/Book/ViewBook/5666>

### *Further reading:*

Andreeva M.V. , Nyukkanov A.N. Forensic veterinary and sanitary examination: author's abstract . diss . ... doctor, associate professor, candidate of veterinary sciences - Yakutsk, 2014.

Litvitsky P.F. Pathological anatomy and pathological physiology. - M.: GEOTAR-Media, 2015. - 496 p.

Vakhrusheva T. I. General pathological anatomy. - M.: Lambert, 2015. - 364 p. <https://e.lanbook.com/book/45681>

Klevno V. A. Forensic medical examination. - M.: GEOTAR-Media, 2013. - 136 p.

Salimov V. A. Practical training in pathological anatomy of animals [Electronic resource ]: Textbook / V. A. Salimov. - 2nd ed., revised . and additional. - St. Petersburg : Publishing house

"Lan", 2013. - 352 p. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-1418-5. URL: [http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\\_FindDoc&id=465234&idb=0](http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465234&idb=0)

Kozlov I.G. , Krivenko D.V. Pathological anatomy and forensic veterinary examination - Saratov: FGBOU VO Saratov SAU., 2020. - 129 p.

*Resources of the information and telecommunications network "Internet":*

RUDN University Electronic Library System and third-party electronic library systems to which university students have access on the basis of concluded agreements:

- Electronic library system of RUDN: [site]. URL: <http://lib.rudn.ru/MegaPro/Web>
- Electronic library system "University Library Online": [website]. URL: <http://www.biblioclub.ru/>
- Educational platform " Urait " : [website ] . URL : <https://urait.ru/>
- Electronic Library System "Lan": [site]. URL : <https://e.lanbook.com/>
- Educational platform " Urait " : [website ] . URL : <https://urait.ru/>

Databases and search engines:

- Electronic fund of legal and normative-technical information: [site]. URL: <https://docs.cntd.ru/>
- Search engine "Yandex": [site]. URL : <https://yandex.ru/>
- Search engine « Google »: [site]. URL : <https://www.google.com/>

*Educational and methodological materials for independent work of students in mastering a discipline/module:*

A course of lectures on the subject "Animal pathology, morphology, physiology, pharmacology and toxicology".

## **7. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF DEVELOPMENT OF COMPETENCES IN THE DISCIPLINE**

Assessment materials and the point -rating system for assessing the mastery of the discipline are presented in the appendix to this work program of the discipline.

### **DEVELOPERS:**

Associate Professor of the Department  
of Veterinary Medicine




E. V. Kulikov

### **HEAD OF THE BUP**

Director of the Department  
of Veterinary Medicine

Yu. A. Vatnikov