

*Federal State Autonomous Educational Institution of Higher Education "Peoples' Friendship
University of Russia"*

Agricultural Technology Institute

Recommended by MCSD

WORKING PROGRAM OF DISCIPLINE

Name of discipline Anatomy and histology of animals

Recommended for training / specialty

36.06.01 "Veterinary and animal science".

Program focus (specialization)

06.02.01 "Diagnosis of diseases and therapy of animals, pathology, oncology and morphology of
animals"

1. Goals and objectives of the discipline:

The purpose of the discipline in the training of veterinarians is to provide graduate students with fundamental morphological knowledge about a functioning, developing and adaptable organism.

Objectives of the subject:

- the general educational task is to provide in-depth familiarization of graduate students with the structure of the animal organism and provides fundamental biological education in accordance with the requirements for higher education institutions with a biological profile.

- the applied problem highlights issues related to functional, evolutionary and clinical anatomy and creates a conceptual basis for the implementation of interdisciplinary structural and logical connections in order to develop skills of medical thinking.

- a special task is to familiarize graduate students with modern trends and methodological approaches used in anatomy to solve the problems of animal husbandry and veterinary medicine, as well as existing achievements in this field.

2. Place of discipline in the structure of HEC :

The discipline " Anatomy and histology of animals " refers to the variable part of Block 1 of the curriculum "Disciplines (modules)" , "Disciplines of choice."

Table No. 1 shows the previous and subsequent disciplines aimed at the formation of the competencies of the discipline in accordance with the competency matrix of HEC.

Table number 1.

Previous and subsequent disciplines aimed at the formation of competencies

No. p / p	Code and name of competency	Previous disciplines	Subsequent disciplines (groups of disciplines)
Universal competencies			
1	UC-5.Ability to follow ethical standards in professional activity .	Diagnosis of diseases and therapy of animals;	Animal pathology; The main stages of the formation of the animal organism; Pedagogical practice; Science research practice
General professional competencies			
2	GPC-1.Own the necessary knowledge system in the field corresponding to the direction of training.	Diagnosis of diseases and therapy of animals;	Animal pathology; The main stages of the formation of the animal organism; Pedagogical practice; Science research practice;

			Science research
3	GPC-6. The ability to improve on the basis of traditional morality.	Diagnosis of diseases and therapy of animals;	Animal pathology; The main stages of the formation of the animal organism
Professional competencies			
4	PC-1. The ability to understand the modern problems of veterinary medicine, livestock and use fundamental ideas in the field of professional activity for the formulation and solution of new problems.	Diagnosis of diseases and therapy of animals;	Animal pathology; The main stages of the formation of the animal organism

3. Requirements for the results of mastering the discipline:

The process of studying the discipline is aimed at the formation of the following competencies:

CC-5. Ability to follow ethical standards in professional activity.

GPC-1. Own the necessary knowledge system in the field corresponding to the direction of training.

GPC-6. The ability to improve on the basis of traditional morality.

PC-1. The ability to understand the modern problems of veterinary medicine, livestock and use fundamental ideas in the field of professional activity for the formulation and solution of new problems.

As a result of studying the discipline, the student must:

To know:

- General patterns of the structure of mammals and birds.
- species-specific features of the structure and location of the structures of the animal organism.
- anatomical and functional and anatomical and topographic characteristics of the body systems and areas of the body, taking into account the species and age characteristics of animals.
- clinical aspects of the functional anatomy of systems and individual organs, taking into account specific features, as well as modern methods of biological analysis of morphological rearrangements used in the treatment of animals.

To be able to:

- handle anatomical and surgical instruments.
- conduct an anatomical autopsy.
- handle cadaveric material and live animals in accordance with the safety precautions rules.
- navigate the location of organs, boundaries of areas according to skeletal landmarks of the body of various species and ages of domestic animals.
- determine the species affiliation of organs by anatomical signs: size, structure, consistency, color.
- conduct a comparative analysis of the observed structural changes, formulate conclusions and justifications for them.
- establish the relationship of the studied material with other disciplines.
- apply the acquired knowledge in practical and scientific activities.

To own:

- specific theoretical knowledge of the discipline.
- modern methods and methods of studying the structural organization of biological objects at all its levels.

- methods for assessing the topography of organs and body systems.
- modern information and innovative technologies.

3. The volume of discipline and types of educational work

The total complexity of the discipline is 4. credit units. ____

Type of study	Total hours	Semester			
					4
Classroom activities (total)	80				80
Including:	-				-
Lectures	40				40
Practical Activities (PP)	40				40
Workshops (C)	-				-
Laboratory work (LR)	-				-
Independent work (total)	37				37
Formative/Summative Assessment	27				27
Total labor time hour	144				144
Zach . units	4				4

5. The content of the discipline

5.1. The content of the sections of the discipline

No. p / p	The name of the discipline section	Section content (topics)
1.	Introduction	- Introduction
2.	Musculoskeletal system	- Bone system, or skeleton (osteology). - Connection of bones (arthrosindesmology). - The muscular system (myology).
3.	General (skin) cover.	- General (skin) cover.
4.	Nervous system (neurology).	- The central part of the nervous system. - The peripheral part of the nervous system. - The vegetative part of the nervous system.
5.	Analyzers.	- Analyzers.
6.	Endocrine device.	- Endocrine device.
7.	Cardiovascular system (angiology).	- Circulatory system. - Lymphatic system. - Organs of hemo - and immunopoiesis .
8.	Splanchnology.	- The digestive apparatus. - Breathe-helping machine. - Genitourinary apparatus.
9.	Features of the anatomy of poultry.	- Features of the anatomy of poultry.

5.2 Sections of the discipline and types of classes

No. p / p	Section Name	Lectures	Practical exercises and laboratory work	IW	Assessment	Total

			PP/C	LR	of them in IF			
1.	Introduction	2	2	-	1	2	3	12
2.	Musculoskeletal system	8	8	-	5	10	3	24
3.	General (skin) cover	2	2	-	1	6	3	12
4.	Nervous system	6	6	-	4	10	3	19
5.	Analyzers	2	2	-	1	8	3	11
6.	Endocrine device	2	2	-	1	4	3	11
7.	The cardiovascular system	8	8	-	5	10	3	23
8.	Splanchnology	2	2	-	1	6	3	9
9.	Features of poultry anatomy	8	8	-	5	8	3	23

6. Laboratory workshop

Not provided.

7. Practical classes (seminars)

No.	Discipline section number	Name of practical training	Labor intensity (hour.)
1.	1.	Introduction	2
2.	2.	Bone system, or skeleton (osteology).	3
3.		Connection of bones (arthrosindesmology).	2
4.		The muscular system (myology).	3
5.	3.	General (skin) cover.	2
6.	4.	The central part of the nervous system.	2
7.		The peripheral part of the nervous system.	2
8.		The autonomic part of the nervous system.	2
9.	5.	Analyzers.	2
10.	6.	Endocrine device.	2
11.	7.	Circulatory system.	3
12.		Lymphatic system.	3
13.		Organs of hemo- and immunopoiesis	2
14.	8.	Digestive apparatus. Breathe-helping machine. Genitourinary apparatus.	2
15.	9.	Features of the anatomy of poultry.	8

8. Logistics

- Personal Computer.
- Multimedia equipment.
- Anatomical instruments - knives, tweezers, scalpels, scissors of all kinds, hammers, saws, etc.
- Stereoscopic and binocular magnifiers.
- Microscopes.
- Tables with a special coating, screw stools.
- Multimedia installations.

- Pet bone preparations.
- Dry and wet joint preparations for pets.
- Demonstration tables and diagrams on the topics of lecture and practical classes.
- Sets of micropreparations.

9 . Inform Discount maintenance of discipline

a) Software

- Windows Enterprise
- Microsoft Office.
- Adobe Acrobat.

b) Databases, reference and search engines

1. www.cnshb.ru ,
2. www.elibrary.ru ,
3. www.vet.purdue.edu ,
4. www.allvet.ru ,
5. www.glossary.ru ,
6. <https://www.ncbi.nlm.nih.gov/pubmed>
7. <http://www.uchvuz.ru>
8. <http://www.veterinarka.ru>
9. <https://www.medlit.biz>
10. <http://effect3.ru>
11. <https://cyberleninka.ru/>

10. Educational and methodological support of the discipline:

a) Main literature:

1. Antipova L.V. Anatomy and histology of farm animals [Electronic resource] / L.V. Antipova, V.S. Slobodyanik, S.M. Suleymanov. - M.: KolosS, 2013. -- 384 p. - (Textbooks and Pedagogical aids for students of higher educational institutions). - ISBN 5-9532-02636.
http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=475869&idb=0
2. Akayevsky A.I. Anatomy of Pets / A.I. Akayevsky, Yu.F. Yudichev, S.B. Seleznev. - M., 2009. -- 638 p.
3. Vasiliev, Yu. G. Cytology. Histology. Embryology: Textbook for high schools / Yu. G. Vasiliev, E.I. Troshin, V.V. Yaglov. - 2nd ed., rev. - SPb. : Doe, 2013. --576 p.
<https://e.lanbook.com/book/5840>

b) Additional literature:

1. Zelenevsky N.V. Anatomy and physiology of animals [Electronic resource]: Textbook / N.V. Zelenevsky, M.V. Schipakin, K.N. Zelenevsky; Under the total. ed. N.V. Zelenevsky. - Electronic text data. - SPb. : Doe, 2015. -- 368 p. : ill. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-1993-7. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=452267&idb=0
2. Zelenevsky N.V. Anatomy of animals. + DVD [Electronic resource]: Textbook / N.V. Zelenevsky, K.N. Zelenevsky. - SPb. : Publishing House "Lan", 2014. - 848 p. -

(Textbooks for universities. Special literature). - + DVD. - ISBN 978-5-8114-1645-5. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465158&idb=0

3. Zelenevsky N.V. International Veterinary Anatomical Nomenclature in Latin and Russian. Nomina Anatomica Veterinaria [Electronic resource]: Reference / N.V. Zelenevsky .- SPb. : Publishing House "Lan", 2013. - 400 p. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-1492-5. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465232&idb=0

11. Methodical instructions for students to develop the discipline (module)

Not provided.

12. Fund of assessment tools for intermediate certification of students in discipline (module)

Materials for assessing the level of mastering the educational material of the discipline "Anatomy and histology of animals" (evaluation materials), including a list of competencies indicating the stages of their formation, a description of indicators and criteria for assessing competencies at various stages of their formation, a description of the assessment scales, typical control tasks or other materials necessary for the assessment of knowledge, abilities, skills and (or) experience of activity, characterizing the stages of the formation of competencies in the process of mastering the educational program, methodological materials that determine the procedures for assessing knowledge, skills, skills and (or) experience of activities that characterize the stages of formation of competencies , developed in full and available for students on the discipline page at TUIS RUDN.

Department Director


_____ Vatnikov Yu.A.