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**Federal State Autonomous Educational Institution for Higher Education PEOPLES'
FRIENDSHIP UNIVERSITY OF RUSSIA
Agrarian and Technological Institute**

WORKING COURSE SYLLABUS

Clinical diagnostics

Recommended by the Methodological Council for the Education Field:

36.05.01 Veterinary medicine

1. GOALS AND OBJECTIVES OF THE DISCIPLINE

The aim of mastering the discipline "**Clinical diagnostics**" is to form fundamental and professional knowledge about the diagnosis of changes in physiological processes and functions in the body of mammals and birds, about their qualitative originality in the body of productive farm animals, domestic, laboratory and exotic animals, necessary for a veterinarian to scientifically substantiate measures related to the diagnosis and subsequent therapy of diseases. The aim is to create optimal conditions for keeping, feeding and exploiting animals, preventing diseases, assessing health, the nature and degree of violations of the activity of organs and the body, determining ways and means of influencing the body in order to correct the activity of organs. The purpose of mastering the discipline "Clinical diagnostics" is the formation of fundamental and professional knowledge about the diagnosis of changes in physiological processes and functions in the body of mammals and birds, about their qualitative originality in the body of productive farm animals, domestic, laboratory and exotic animals, necessary for a veterinarian to scientifically substantiate measures related to the diagnosis and subsequent therapy of diseases, with the creation of optimal conditions for the maintenance, feeding and exploitation of animals, the prevention of diseases, assessment of health, nature and degree of violations of the activity of organs and the body, determination of ways and means of influencing the body in order to correct the activity of organs.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "**Clinical diagnostics**" is aimed at creating the following competencies (parts of competencies) for students:

Table 2.1. List of competencies formed by students during the development of the discipline (results of the development of the discipline)

Code	Competence	Indicators of competence accomplishment (within the discipline)
GPC -1	The ability to determine the biological status and normative clinical indicators of organs and systems of the animal body.	GPC-1.1 Knows the structure and functions of the main systems of the animal body, taking into account the specific features
		GPC-1.2 He s able to predict the expected violations of the biological status in case of suspected development of diseases
		GPC-1.3 He is able to determine the main indicators of the activity of individual body systems and draw conclusions about the presence of deviations from the standard values

		GPC-1.4 Has the skills of sampling biological fluids and tissues for research, performing laboratory tests, interpreting research results.
GPC -4	The ability to use methods of solving problems using modern equipment in the development of new technologies in professional activity and to use modern professional methodology for conducting experimental research and interpreting their results.	GPC-4.1 Possesses the conceptual and methodological apparatus of basic natural sciences at a level sufficient for full-fledged professional activity at the modern level.
		GPC-4.2 He knows the methods of solving problems using modern equipment.
		GPC-4.3 He is ready to use modern methodology in the development and conduct of experimental research.
GPC -5	The ability to draw up special documentation, analyze the results of professional activity and submit accounting documents using specialized databases.	GPC-5.1 Has the skills to search for the necessary forms of documentation on official websites and in specialized databases.
		GPC-5.2 Possesses professional terminology and skills in filling out analytical and reporting documents of a professional orientation.
		GPC-5.3 He is able to use specialized software to analyze the results of professional activity and compile accounting documentation.
GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	GPC-6.1 Has knowledge in the field of etiology and pathogenesis of animal diseases of different species.
		GPC-6.2 Has the skills to diagnose non-infectious, infectious and invasive diseases, identify pathogens of infectious and invasive diseases in animals.
		GPC-6.3 He knows the patterns of the occurrence and spread of diseases in animal populations, factors predisposing to diseases and the causes of possible complications.
PC -1	The ability to collect anamnesis of life and disease of animals to identify the causes of diseases and their nature.	PC -1.1 He is able to collect an anamnesis of the animal's life and reflect this in the relevant service documentation.
		PC-1.2 He is able to collect the anamnesis of the animal's disease and reflect it in the patient's medical history.
		PC-1.3 He is able to identify possible causes of the disease in an animal, factors

		predisposing to the disease and concomitant conditions affecting the nature of the course of the disease and use this information when making a diagnosis.
PC -2	The ability to conduct a general clinical study of animals in order to establish a preliminary diagnosis and determine the further research program, as well as in accordance with the plan of antiepidemiological measures, the plan of prevention of non-infectious animal diseases.	PC-2.1 He is able to conduct a general clinical study of animals of different species in order to establish a preliminary diagnosis and determine the further research program
		PC-2.2 He is able to conduct mass clinical studies of animals in accordance with the plan of antiepidemiological measures, the plan of prevention of non-infectious animal diseases
PC -3	Ability to develop animal research programs using special (instrumental) and laboratory methods.	PC-3.1 He is able to develop individual animal research programs, including the use of special (instrumental) and laboratory methods to detect deviations from the physiological norm of the state of a living organism, conduct differential diagnosis of the detected pathology or control the course of the disease and the effectiveness of the prescribed treatment.
		PC-3.2 Capable of developing mass comprehensive animal research programs (medical examination programs) of animals, taking into account their type and purpose, both general and special.
PC -4	The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis.	PC-4.1 Able to conduct additional animal studies using laboratory methods to clarify the diagnosis.
		PC-4.2 Able to conduct additional animal studies using special (instrumental) methods to clarify the diagnosis.
PC -5	The ability to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods.	PC-5.1 He is able to diagnose patients of various types based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods.
		PC -5.2 He is able to predict the risks of diseases based on anamnestic data, the results of general, special (instrumental) and laboratory studies.
PC -10	The ability to determine the need for the use of surgical	PC-10.1 Able to determine the need for the use of surgical methods in the

	methods in the treatment of animals.	treatment of animals;
		PC-10.2 Able to choose the optimal surgical method for the patient, taking into account the external conditions and the status of the patient's body, and if necessary, several manipulations - their order and time distribution;
		PC-10.3 He is able to take into account the risks and possible complications accompanying surgical interventions and take measures to prevent them.
PC -14	The ability to conduct repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment and adjust the treatment plan of animals (if necessary) based on the results of the evaluation of the effectiveness of treatment.	PC-14.1 He is able to develop a plan of repeated studies necessary and sufficient to assess the predicted changes in the patient's health.
		PC-14.2 Able to conduct a repeated clinical examination, taking into account the specifics of diseases previously diagnosed in the patient.
		PC-14.3 Able to carry out the necessary repeated instrumental and laboratory tests.
		PC-14.4 He is able to analyze the identified changes, evaluate the effectiveness of the treatment and, if necessary, correct the prescribed course of treatment.
PC -18	The ability to draw up a plan for the medical examination of animals, taking into account their types and purpose, to conduct medical examinations, to develop recommendations for carrying out preventive and curative measures based on the results of the examination of animals conducted as part of the medical examination	PC-18.1 He is able to make a plan for the medical examination of animals, general or specialized, taking into account their types and purpose
		PC-18.2 He is able to organize and conduct medical examination according to the drawn up plan
		PC-18.3 He is able, based on the results of medical examination, to give recommendations on the implementation of therapeutic and preventive and curative measures aimed at improving the health of a group of animals

3. COURSE IN HIGHER EDUCATION

The discipline "**Clinical diagnostics**" refers to the mandatory part of block B1 of the Educational Program of Higher Education.

As part of the Educational Program of Higher Education, students also master other disciplines and /or practices that contribute to achieving the planned results of mastering the discipline "**Clinical diagnostics**".

Table 3.1. List of Higher Education Program components disciplines that contribute to expected learning outcomes

Competence code	Competence	Previous Disciplines (Modules)	Subsequent Disciplines (Modules)
GPC -1	The ability to determine the biological status and normative clinical indicators of organs and systems of the animal body.	Animal anatomy Cytology, histology and embryology Physiology and ethology of animals Pathological physiology	Pathological anatomy Instrumental diagnostic methods Obstetrics, gynecology and andrology Immunology Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Veterinary and industrial laboratories with the basics of design Bee diseases and entomophages Fish pathology and aquaculture Anesthesiology, intensive care and intensive care
GPC -4	The ability to use methods of solving problems using modern equipment in the development of new technologies in professional activity and to use modern professional methodology for conducting experimental research and interpreting their results.	Inorganic and analytical chemistry Organic Chemistry Biological physics Computer science Physical and colloidal chemistry Cytology, histology and embryology Biological chemistry Veterinary microbiology and	Pathological anatomy Operative surgery with topographic anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery

		mycology Virology and biotechnology Physiology and ethology of animals Breeding with the basics of private animal husbandry Pathological physiology Veterinary Radiobiology	Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases
GPC -5	The ability to draw up special documentation, analyze the results of professional activity and submit accounting documents using specialized databases.	Veterinary genetics Computer science Breeding with the basics of private animal husbandry	Pathological anatomy Operative surgery with topographic anatomy Instrumental diagnostic methods Obstetrics, gynecology and andrology Internal non-infectious diseases Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Organization of veterinary business Forensic veterinary examination and autopsy of animals Veterinary deontology Economics and organization of agricultural production Clinical laboratory diagnostics Laboratory diagnostics of infectious and invasive diseases Organization of state veterinary supervision Veterinary and

			industrial laboratories with the basics of design Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology
GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	Biology with the basics of ecology Life safety Veterinary microbiology and mycology Virology and biotechnology Animal health and welfare Feeding animals with the basics of feed production Veterinary Radiobiology	Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Veterinary and sanitary examination Organization of veterinary business Forensic veterinary examination and autopsy of animals Introduction to the specialty General and veterinary ecology Veterinary sanitation Technology of processing livestock products Medicinal and poisonous plants Forage plants Animal Health Clinical laboratory diagnostics Laboratory

			<p>diagnostics of infectious and invasive diseases Organization of state veterinary supervision Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Bee diseases and entomophages Fish pathology and aquaculture Diseases of exotic animals Anesthesiology, intensive care and intensive care Veterinary Ophthalmology Animal Dentistry</p>
PC -1	The ability to collect anamnesis of life and disease of animals to identify the causes of diseases and their nature.	<p>Veterinary genetics Physiology and ethology of animals Breeding with the basics of private animal husbandry Animal health and welfare Feeding animals with the basics of feed production</p>	<p>Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Fundamentals of rhetoric and communication Veterinary deontology Zoopsychology Animal Health Personality psychology and professional self-determination Diseases of horses Diseases of productive animals</p>

			Diseases of small pets Diseases of small pets Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
PC -2	The ability to conduct a general clinical study of animals in order to establish a preliminary diagnosis and determine the further research program, as well as in accordance with the plan of antiepidemiological measures, the plan of prevention of non-infectious animal diseases.	Animal anatomy Physiology and ethology of animals Pathological physiology	Pathological anatomy Obstetrics, gynecology and andrology Bee diseases and entomophages Fish pathology and aquaculture Anesthesiology, intensive care and intensive care
PC -3	Ability to develop animal research programs using special (instrumental) and laboratory methods.	Animal Anatomy Organic Chemistry Biological physics Physical and colloidal chemistry Biological chemistry Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology	Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epidemiology and infectious diseases Immunology Veterinary deontology Clinical laboratory diagnostics

			<p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Veterinary and industrial laboratories with the basics of design</p> <p>Diseases of horses</p> <p>Diseases of productive animals</p> <p>Diseases of small pets</p> <p>Diseases of small pets</p> <p>Bee diseases and entomophages</p> <p>Fish pathology and aquaculture</p> <p>Diseases of exotic animals</p> <p>Anesthesiology, intensive care and intensive care</p> <p>Dermatology</p> <p>Cardiology</p> <p>Endocrinology</p> <p>Nephrology</p> <p>Reconstructive and reconstructive surgery</p> <p>Veterinary</p> <p>Ophthalmology</p> <p>Animal Dentistry</p>
PC -4	The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis.	<p>Animal anatomy</p> <p>Biological physics</p> <p>Cytology, histology and embryology</p> <p>Biological chemistry</p> <p>Veterinary microbiology and mycology</p> <p>Virology and biotechnology</p> <p>Physiology and ethology of animals</p> <p>Pathological physiology</p>	<p>Pathological anatomy</p> <p>Instrumental diagnostic methods</p> <p>Obstetrics, gynecology and andrology</p> <p>Internal non-infectious diseases</p> <p>General surgery</p> <p>Private Veterinary surgery</p> <p>Parasitology and invasive diseases</p> <p>Epizootology and infectious diseases</p> <p>Clinical laboratory diagnostics</p>

			<p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Diseases of horses</p> <p>Diseases of productive animals</p> <p>Diseases of small pets</p> <p>Diseases of small pets</p> <p>Diseases of exotic animals</p> <p>Anesthesiology, intensive care and intensive care</p> <p>Dermatology</p> <p>Cardiology</p> <p>Endocrinology</p> <p>Nephrology</p> <p>Veterinary</p> <p>Ophthalmology</p> <p>Animal Dentistry</p>
PC -5	<p>The ability to make a diagnosis based on the analysis of anamnesis data, general, special (instrumental) and laboratory research methods.</p>	<p>Veterinary genetics</p> <p>Cytology, histology and embryology</p> <p>Physiology and ethology of animals</p> <p>Breeding with the basics of private animal husbandry</p> <p>Feeding animals with the basics of feed production</p> <p>Pathological physiology</p>	<p>Pathological anatomy</p> <p>Toxicology</p> <p>Obstetrics, gynecology and andrology</p> <p>Internal non-infectious diseases</p> <p>General surgery</p> <p>Private Veterinary surgery</p> <p>Parasitology and invasive diseases</p> <p>Epizootology and infectious diseases</p> <p>Forensic veterinary examination and autopsy of animals</p> <p>Zoopsychology</p> <p>Diseases of horses</p> <p>Diseases of productive animals</p> <p>Diseases of small pets</p> <p>Diseases of small pets</p> <p>Bee diseases and entomophages</p> <p>Fish pathology and aquaculture</p>

			Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
PC -10	The ability to determine the need for the use of surgical methods in the treatment of animals.	Veterinary genetics Cytology, histology and embryology Veterinary microbiology and mycology Physiology and ethology of animals Pathological physiology	Pathological anatomy Obstetrics, gynecology and andrology General surgery Private Veterinary surgery Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry
PC -14	The ability to conduct repeated examinations and studies of animals to assess the effectiveness and safety of the prescribed treatment and adjust the treatment plan of animals (if necessary) based on the results of the evaluation of the effectiveness of treatment.	Cytology, histology and embryology Physiology and ethology of animals Pathological physiology Veterinary Pharmacology	Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary

			<p>surgery Parasitology and invasive diseases Epizootology and infectious diseases Clinical laboratory diagnostics Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery Veterinary Ophthalmology Animal Dentistry</p>
PC -18	<p>The ability to draw up a plan for the medical examination of animals, taking into account their types and purpose, to conduct medical examinations, to develop recommendations for carrying out preventive and curative measures based on the results of the examination of animals conducted as part of the medical examination</p>	<p>Veterinary genetics Physiology and ethology of animals Breeding with the basics of private animal husbandry Animal health and welfare Feeding animals with the basics of feed production Pathological physiology Veterinary Pharmacology</p>	<p>Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Animal Health Clinical laboratory diagnostics Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals</p>

			Dermatology Cardiology Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry
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4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline " **Clinical diagnostics** " is 7 credits.

*Table 4.1. Types of academic activities during the period of the HE program mastering for **full-time** study*

Types of academic activities		HOURS	Semesters				
			5	6	-	-	
Contact academic hours		108	54	54	-	-	
including							
Lectures		36	18	18	-	-	
Lab work		72	36	36	-	-	
Seminars (workshops/tutorials)		-			-	-	
Self-study		126	46	80	-	-	
Evaluation and assessment (exam/pass/fail grading)		18	8	10	-	-	
Course workload		Academic hour	252	108	144	-	-
		Credit unit	7	3	4	-	-

*Table 4.2. Types of academic activities during the period of the HE program mastering for **part-time** study*

Types of academic activities		HOURS	Semesters				
			5	6	-	-	
Contact academic hours		72	36	36	-	-	
including							
Lectures		36	18	18	-	-	
Lab work		36	18	18	-	-	
Seminars (workshops/tutorials)		-			-	-	
Self-study		146	22	124	-	-	
Evaluation and assessment (exam/pass/fail grading)		34	14	20	-	-	
Course workload		Academic hour	252	72	180	-	-
		Credit unit	7	2	5	-	-

5. CONTENT OF THE DISCIPLINE

Table 5.1 Content of the discipline (module) by type of academic work

Name of the discipline section	Content of the section (topics)	Types of academic activities
Section 1. General clinical diagnosis.	Topic 1.1 Introduction.	Lectures, Lab work.
	Topic 1.2 Biogeocenotic diagnostics.	Lectures, Lab work.
Section 2. Private clinical diagnostics. Cardiovascular and respiratory systems.	Topic 2. 1 Cardiovascular system.	Lectures, Lab work.
	Topic 2.2 Respiratory system.	Lectures, Lab work.
Section 3. Private clinical diagnostics. Organ systems.	Topic 3.1 The digestive system.	Lectures, Lab work.
	Topic 3.2 Urinary system.	Lectures, Lab work.
	Topic 3.3 The nervous system.	Lectures, Lab work.
	Topic 3.4 Fundamentals of clinical biochemistry.	Lectures, Lab work.
	Topic 3.5 Endocrine system.	Lectures, Lab work.

6. CLASSROOM INFRASTRUCTURE AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the discipline

<i>Classroom for Academic Activity Type</i>	<i>Equipping the classroom</i>	Specialized educational/laboratory equipment, software and materials for the development of the discipline (if necessary)
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	<ul style="list-style-type: none"> - Portable ultrasound machine. - Endoscopic equipment. - Biochemical analyzer of blood, urine and hematological analyzer of blood (ILAB 650, PCE 90VET, etc.). - Hemometers GS (Sali). - Goryaev's counting chamber. - Elektrokimograph. - Biological microscopes. - Devices for determining the rate of

		<p><i>erythrocyte sedimentation:</i> <i>Panchenkov capillaries.</i></p> <ul style="list-style-type: none"> - <i>Registration capsule (set)</i> - <i>Counter of shaped blood elements.</i> - <i>Korotkov tonometer for measuring blood pressure</i> - <i>Phonendoscope.</i> - <i>Mixers (melangers) for counting leukocytes, erythrocytes</i> - <i>A device for determining the Rh factor, blood groups</i>
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	<ul style="list-style-type: none"> - <i>Portable ultrasound machine.</i> - <i>Endoscopic equipment.</i> - <i>Biochemical analyzer of blood, urine and hematological analyzer of blood (ILAB 650, PCE 90VET, etc.).</i> - <i>Hemometer GS (Sali).</i> - <i>Goryaev's counting chamber.</i> - <i>Electrokimograph.</i> - <i>Biological microscopes.</i> - <i>Devices for determining the rate of erythrocyte sedimentation:</i> <i>Panchenkov capillaries.</i> - <i>Registration capsule (set)</i> - <i>Counter of shaped blood elements.</i> - <i>Korotkov tonometer for measuring blood pressure</i> - <i>Phonendoscope.</i> - <i>Mixers (melangers) for counting leukocytes, erythrocytes</i> - <i>A device for determining the Rh factor, blood groups</i>
Self-studies	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to an electronic information and educational environment.	-

7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main reading:

1. Ivanov A.A. Clinical laboratory diagnostics [Electronic resource] : Textbook / A.A. Ivanov. – St. Petersburg : Publishing House "Lan", 2017. - 432 p.
http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465014&idb=0

2. Usha Boris Veniaminovich. 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. : http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=487452&idb=0
3. Clinical diagnostics in veterinary medicine 2020.-161 p. <https://e.lanbook.com/book/148538>

Additional Reading:

1. Kalyuzhny I.I., Shcherbakov G.G. Clinical gastroenterology of animals / Yashin A.V., Barinov N.D., Derezhina T.N. – M.: Lan, 2015 – 448s. <https://e.lanbook.com/book/61362>
2. Korobov A.V., Savinkov A.V., Vorobyev A.V., Savinkova M.V. Dictionary of veterinary terms on clinical diagnosis and internal non-infectious diseases. - 1-ed. ed. - St. Petersburg: Lan, 2007. - 320 p.
3. Clinical diagnostics of internal non-infectious animal diseases/Usha B.V., Belyakov I.M., Pushkarev R.P.-M., 2004.- 835 p.
4. Kamyshnikov, V. S. Pocket doctor's guide to laboratory diagnostics / V.S. Kamyshnikov. - M.: MEDpress-inform, 2014. - 400 p.
5. Medvedeva, M. Clinical veterinary laboratory diagnostics. Handbook for veterinarians / M. Medvedeva. - M.: Aquarium-Print, 2013. - 416 p.
6. Annikova L.V. CLINICAL DIAGNOSTICS. - Saratov: Saratov State Pedagogical University, 2016. - 114 p.

Resources of the Internet information and telecommunication network:

1. Electronic library system of RUDN and third-party Electronic library systems to which university students have access on the basis of concluded contracts:
 - Electronic library system of RUDN - ELS RUDN <http://lib.rudn.ru/MegaPro/Web>
 - ELS "University Library online"<http://www.biblioclub.ru>
 - ELS Yurayt <http://www.biblio-online.ru>
 - ELS "Student Consultant"www.studentlibrary.ru
 - ELS "Lan"<http://eZlanbook.com/>
 - ELS "Trinity Bridge"<http://www.trmost.com/>
2. Databases and search engines:
 - electronic fund of legal and regulatory and technical documentation <http://docs.cntd.ru/>
 - search engine Yandex <https://www.yandex.ru/>
 - search engine Google <https://www.google.ru/>
 - abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

Educational and methodological materials for independent work of students during the development of the discipline/ module*:

1. A course of lectures on the discipline "**Clinical diagnostics**".
2. Laboratory workshop on the discipline "**Clinical diagnostics**".

* - All educational and methodological materials for independent work of students are placed in accordance with the current procedure on the discipline page in the **Telecommunication educational and Information System!**

8. MID-TERM ASSESSMENT

Evaluation materials and a point-rating system* for assessing the level of competence formation (part of competencies) based on the results of mastering the

discipline "**Clinical diagnostics**" are presented in the Appendix to this Work Program of the discipline.

* - Assessment Materials and a Point Rating System are formed based on the requirements of the relevant local regulatory act of the RUDN.

DEVELOPER:

Associate Professor of the Department of Veterinary
Medicine

Position, Basic curriculum

Signature

Karamyan A.S.

Full name.

HEAD OF THE DEPARTMENT:

Department of Veterinary Medicine

Name Basic Curriculum

Signature

Vatnikov Yu.A.

Full name.

HEAD OF THE HIGHER EDUCATION PROGRAM:

Director of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

Vatnikov Yu.A.

Full name