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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 laboratory 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 the study "**Clinical laboratory diagnostics**" is the development by students of theoretical, methodological and practical knowledge that forms the modern chemical basis for the development of core academic disciplines and the implementation of the main professional tasks: prevention and treatment of animal diseases, increasing the production of high-quality products and raw materials of animal origin, environmental protection from pollution, etc.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The development of the discipline "**Clinical laboratory 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)
UK -12	The ability to search for the necessary sources of information and data, to perceive, analyze, memorize and transmit information using digital means, as well as using algorithms when working with data obtained from various sources in order to effectively use the information received to solve problems; to evaluate information, its reliability, build logical conclusions based on incoming information and data	UK -12.1 Searches for the necessary sources of information and data, perceives, analyzes, remembers and transmits information using digital means, as well as using algorithms when working with data obtained from various sources in order to effectively use the information received to solve problems
		UK-12.2 Evaluates information, its reliability, builds logical conclusions based on incoming information and data
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 -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
PC -19	The ability to perform post-mortem diagnostic examination of animals in order to establish pathological processes, diseases, causes of death.	PC-19.1 Able to conduct a general examination of animal corpses before autopsy.
		PC-19.2 He is capable of performing autopsy of animal corpses using special tools and compliance with safety requirements.
		PC -19.3 He is able to establish the cause of death and a pathoanatomic diagnosis in accordance with generally accepted criteria and classifications, lists of animal diseases.

		PC-19.4 He is able to formalize the results of a postmortem diagnostic examination of an animal in the autopsy protocol.
GPC -1	The ability to determine the biological status and normative clinical indicators of organs and systems of the animal body.	<p>GPC-1.1 Knows the structure and functions of the main systems of the animal body, taking into account the specific features</p> <p>GPC-1.2 He is able to predict the expected violations of the biological status in case of suspected development of diseases</p> <p>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</p> <p>GPC-1.4 Has the skills of sampling biological fluids and tissues for research, performing laboratory tests, interpreting research results.</p>
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.	<p>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.</p> <p>GPC-4.2 He knows the methods of solving problems using modern equipment.</p> <p>GPC-4.3 He is ready to use modern methodology in the development and conduct of experimental research.</p> <p>GPC-4.4 Uses modern professional methodology in interpreting research results.</p>
GPC -5	The ability to draw up special documentation, analyze the results of professional activity and submit accounting documents using specialized databases.	<p>GPC-5.1 Has the skills to search for the necessary forms of documentation on official websites and in specialized databases.</p> <p>GPC-5.2 Possesses professional terminology and skills in filling out analytical and reporting documents of a professional orientation.</p> <p>GPC-5.3 He is able to use specialized software to analyze the results of professional activity and compile accounting documentation.</p>
GPC -6	The ability to analyze, identify and assess the risk of the risk of	GPC-6.1 Has knowledge in the field of etiology and pathogenesis of animal

	the occurrence and spread of diseases.	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.
GPC -7	He is able to understand the principles of modern information technologies and use them to solve the tasks of professional activity.	GPC-7.1 Understands the principles of modern computer technology and telecommunications and is able to use them to solve professional problems;
		GPC-7.2 Uses modern special software and specialized databases to solve professional tasks and perform official duties;
		GPC-7.3 Has the skills to work on modern medical diagnostic and therapeutic equipment with software;
		GPC-7.4 Uses specialized databases to solve professional problems in the field of diagnostics and treatment of animals of various species;
		GPC-7.5 Uses geoinformation systems and software complexes when collecting and analyzing information related to the assessment of the spread of infectious diseases, epizootic situations, planning and evaluating the effectiveness of anti-epizootic measures.

3. COURSE IN HIGHER EDUCATION

The discipline "**Clinical laboratory diagnostics**" belongs to the part formed by the participants of educational relations of the 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 laboratory 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)
UK -12	The ability to search for the necessary sources of information and data, to perceive, analyze, memorize and transmit information using digital means, as well as using algorithms when working with data obtained from various sources in order to effectively use the information received to solve problems; to evaluate information, its reliability, build logical conclusions based on incoming information and data	Jurisprudence Computer science Philosophy Life safety Instrumental diagnostic methods Organization of veterinary business Forensic veterinary examination and autopsy of animals Mathematics Veterinary deontology Medicinal and poisonous plants Fundamentals of intellectual work Personality psychology and professional self-determination	Laboratory diagnostics of infectious and invasive diseases Organization of state veterinary supervision Veterinary and industrial laboratories with the basics of design Biometrics in veterinary medicine Fundamentals of social and legal knowledge Space technologies in the service of the agro-industrial complex
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 Clinical diagnosis Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and	Laboratory diagnostics of infectious and invasive diseases Veterinary and industrial laboratories with the basics of design 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 Dermatology Cardiology Endocrinology Nephrology Reconstructive and

		invasive diseases Epizootology and infectious diseases Immunology Veterinary deontology	reconstructive surgery Veterinary Ophthalmology Animal Dentistry
PC -4	The ability to conduct clinical studies of animals using special (instrumental) and laboratory methods to clarify the diagnosis.	Animal anatomy Biological physics Cytology, histology and embryology Biological chemistry Veterinary microbiology and mycology Virology and biotechnology Physiology and ethology of animals Pathological physiology Clinical diagnosis Pathological anatomy Instrumental diagnostic methods Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases	Laboratory diagnostics of infectious and invasive diseases 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 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 Clinical diagnosis Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases	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

		<p>General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases</p>	<p>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 Clinical diagnosis Pathological anatomy Instrumental diagnostic methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Animal Health</p>	<p>Diseases of horses Diseases of productive animals Diseases of small pets Diseases of small pets Diseases of exotic animals Dermatology Cardiology Endocrinology Nephrology Veterinary Ophthalmology Animal Dentistry</p>
PC -19	<p>The ability to perform post-mortem diagnostic examination of animals in order to establish pathological processes, diseases, causes of death.</p>	<p>Cytology, histology and embryology Life safety Pathological anatomy Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases</p>	<p>Laboratory diagnostics of infectious and invasive diseases Diseases of horses Diseases of productive animals Diseases of small pets Bee diseases and entomophages Fish pathology and aquaculture Diseases of exotic animals Dermatology</p>

		<p>Epizootology and infectious diseases</p> <p>Veterinary and sanitary examination</p> <p>Forensic veterinary examination and autopsy of animals</p>	<p>Cardiology</p> <p>Endocrinology</p> <p>Nephrology</p> <p>Veterinary</p> <p>Ophthalmology</p> <p>Animal Dentistry</p>
GPC -1	<p>The ability to determine the biological status and normative clinical indicators of organs and systems of the animal body.</p>	<p>Animal anatomy</p> <p>Cytology, histology and embryology</p> <p>Physiology and ethology of animals</p> <p>Pathological physiology</p> <p>Clinical diagnosis</p> <p>Pathological anatomy</p> <p>Instrumental diagnostic methods</p> <p>Obstetrics, gynecology and andrology</p> <p>Immunology</p>	<p>Laboratory diagnostics of infectious and invasive diseases</p> <p>Veterinary and industrial laboratories with the basics of design</p> <p>Bee diseases and entomophages</p> <p>Fish pathology and aquaculture</p> <p>Anesthesiology, intensive care and intensive care</p>
GPC -4	<p>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.</p>	<p>Inorganic and analytical chemistry</p> <p>Organic Chemistry</p> <p>Biological physics</p> <p>Computer science</p> <p>Physical and colloidal chemistry</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>Breeding with the basics of private animal husbandry</p> <p>Pathological physiology</p> <p>Veterinary</p> <p>Radiobiology</p> <p>Clinical diagnosis</p> <p>Pathological anatomy</p> <p>Operative surgery with topographic anatomy</p> <p>Instrumental diagnostic</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>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>

		<p>methods Toxicology Obstetrics, gynecology and andrology Internal non-infectious diseases General surgery Private Veterinary surgery Parasitology and invasive diseases Epizootology and infectious diseases Variable component Mathematics Immunology Veterinary sanitation Technology of processing livestock products Medicinal and poisonous plants Forage plants Fundamentals of intellectual work Personality psychology and professional self-determination</p>	
GPC -5	<p>The ability to draw up special documentation, analyze the results of professional activity and submit accounting documents using specialized databases.</p>	<p>Veterinary genetics Computer science Breeding with the basics of private animal husbandry Clinical diagnosis 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</p>	<p>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</p>

		<p>examination Organization of veterinary business Forensic veterinary examination and autopsy of animals Veterinary deontology Economics and organization of agricultural production</p>	
GPC -6	The ability to analyze, identify and assess the risk of the risk of the occurrence and spread of diseases.	<p>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 Clinical diagnosis 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</p>	<p>Laboratory 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>

		specialty General and veterinary ecology Veterinary sanitation Technology of processing livestock products Medicinal and poisonous plants Forage plants Animal Health	
GPC -7	He is able to understand the principles of modern information technologies and use them to solve the tasks of professional activity.	Computer science Instrumental diagnostic methods Organization of veterinary business Mathematics Fundamentals of intellectual work	Laboratory diagnostics of infectious and invasive diseases Veterinary and industrial laboratories with the basics of design Anesthesiology, intensive care and intensive care Dermatology Cardiology Endocrinology Nephrology Reconstructive and reconstructive surgery

4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the discipline "**Clinical laboratory diagnostics**" is 2 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			
		7	-	-	-
Contact academic hours	36	36			
including					
Lectures	-	-	-	-	-
Lab work	36	36	-	-	-
Seminars (workshops/tutorials)	-	-	-	-	-
Self-study	28	28	-	-	-
Evaluation and assessment (exam/pass/fail grading)	8	8	-	-	-
Course workload	Academic	72	72	-	-

hour					
Credit unit	2	2	-	-	-

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			
		7	-	-	-
Contact academic hours	18	18	-	-	-
including					
Lectures	-	-	-	-	-
Lab work	-	-	-	-	-
Seminars (workshops/tutorials)	18	18	-	-	-
Self-study	80	80	-	-	-
Evaluation and assessment (exam/pass/fail grading)	10	10	-	-	-
Course workload	Academic hour	108	108	-	-
	Credit unit	3	3	-	-

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. Introduction.	Topic 1.1 Objects and methods of laboratory research.	Lab work.
Section 2. Blood testing.	Topic 2.1. Rules for collecting material from different types of animals.	Lab work.
	Topic 2.2. Principles of construction of the scheme and algorithm of research.	Lab work.
	Topic 2.3 General clinical blood test.	Lab work.
	Topic 2.4. General principles of calculus of shaped blood elements. Counting red blood cells.	Lab work.
	Topic 2.5. White blood cell count. Elimination of the leukocyte formula.	Lab work.
	Topic 2.6. Methods for determining hemoglobin.	Lab work.

	Topic 2.7. Obtaining defibrinated blood plasma, serum.	Lab work.
	Topic 2.8. Determination of erythrocyte sedimentation rate (ESR).	Lab work.
Section 3. Laboratory diagnostics of the isolation system. Urine analysis.	Topic 3.1. Biochemical blood analysis.	Lab work.
	Topic 3.2. Rules for collecting material from different types of animals.	Lab work.
	Topic 3.3. Principles of construction of the scheme and algorithm of research.	Lab work.
	Topic 3.4. Investigation of kidney functions, physico-chemical properties of urine.	Lab work.
	Topic 3.5. General clinical analysis of urine.	Lab work.
	Topic 3.6. Biochemical analysis of urine.	Lab work.
	Topic 3.7. Preparation of a smear.	Lab work.
Section 4. Laboratory diagnostics of the endocrine system.	Topic 4.1. Microscopy of urinary sediment. Uroliths.	Lab work.
Section 5. Laboratory diagnostics of the respiratory system.	Topic 5.1 Diagnosis of pathology of the endocrine glands (biochemical blood analysis).	Lab work.
	Topic 5.2. Principles of sampling of punctate and biopsy.	Lab work.
Section 6. Laboratory diagnostics of the digestive system.	Topic 6.1. Laboratory examination of the material.	Lab work.
	Topic 6.2 Determination of the enzymatic activity of saliva.	Lab work.
	Topic 6.3 Study of gastric secretion.	Lab work.
	Topic 6.4 Determination of acidity and enzymatic activity of gastric juice.	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)
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	- <i>Biochemical analyzer of blood, urine and hematological analyzer of blood (ILAB 650, PCE 90VET, etc.)</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.	-
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7. RECOMMENDED SOURCES FOR COURSE STUDIES

Main reading:

1. Laboratory diagnostics of viral diseases of animals [Electronic resource] : Textbook / Comp. P.I. Baryshnikov, V.V. Razumovskaya. - 2nd ed., ispr. ; Electronic text data. - St. Petersburg : Lan, 2015. - 672 p. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=452257&idb=0
2. 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
3. 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

Additional Reading:

1. Handbook of veterinary therapist [Electronic resource] / G.G. Shcherbakov [et al.]; Under the general ed. of G.G. Shcherbakov. - 5th ed., ispr. and add. - St. Petersburg : Publishing House "Lan", 2009. - 656 p. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=465300&idb=0
2. Korobov Alexander Vasilyevich. New instruments, devices and scientific and technological developments in the field of clinical veterinary therapy by Professor Korobov. Internal non-infectious diseases of animals [Text] : Textbook (monograph) / A.V. Korobov. - M. : Greenlight, 2008. - 48 p.
3. Methods of veterinary clinical laboratory diagnostics [Text] : Handbook / I.P. Kondrakhin [et al.]; Edited by I.P.Kondrakhin. - M. : KolosS, 2004. - 520 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 laboratory diagnostics**".
2. Laboratory workshop on the discipline "**Clinical laboratory 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 laboratory 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:

Professor of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

Vatnikov Yu.A.

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