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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
RUDN University**

Agrarian and Technological Institute

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Epizootology and infectious diseases

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:

36.05.01 Veterinary

higher education programme profile/specialisation title

1. GOALS AND OBJECTIVES OF THE COURSE

The aim of the mastering the course "**Epizootology and infectious diseases**" is to master students with theoretical knowledge and practical skills in the field of general and private epizootology and infectology, providing identification of the causes and conditions of the occurrence and spread of infectious diseases, justification and organization of antiepizootic and preventive measures aimed at their prevention, reduction of infectious diseases of animals and elimination of individual infections.

22. REQUIREMENTS FOR LEARNING OUTCOMES

The implementation of the course "**Epizootology and infectious diseases**" 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 course (results of the development of the discipline)

Competence code	Competence descriptor	Indicators of competence accomplishment (within the discipline)
GPC-6	Capable of analyzing, identifying, and assessing the risk of disease emergence and spread	GPC-6.1 Have knowledge of etiology and pathogenesis of animal diseases of different species.
		GPC-6.2 Know the laws of the emergence and spread of diseases in animal populations, predisposing factors to diseases and the causes of possible complications.
PC-6	Ability to diagnose and predict the course and spread of disease based on clinical, laboratory, and instrumental diagnostic data, as well as additional diagnostic methods.	PC-6.2 Knows how to make a complex diagnosis, taking into account the results of anamnesis, clinical, laboratory and instrumental studies.
		PC-6.3 Knows how to predict the course and result of treatment of the main disease based on the complex of concomitant diagnoses and factors that complicate the patient's condition.
		PC-6.3 Knows how to predict the course and result of treatment of the main disease based on the complex of concomitant diagnoses and factors that complicate the patient's condition.
PC-6.4 Knows how to assess the risks of spread of the identified disease.		
PC-11	Ability to develop an annual plan of anti-epizootic measures, plan of prevention	PC-11.1 Able to conduct epizootological examination of the organization, territory

	of non-communicable diseases of animals, plan of veterinary and sanitary measures, including a plan of preventive immunizations (vaccinations) and therapeutic and prophylactic treatments.	PC-11.2 Is able to develop an annual plan of anti-epizootic and anti-parasitic measures, a plan for the prevention of non-communicable diseases of animals, the plan of veterinary and sanitary measures
		PC-11.3 Is able to make individual and group plans for preventive immunizations (vaccinations), taking into account the epizootic situation in the area of animals, the plan of anti-epizootic activities, as well as state and regional veterinary and sanitary rules and requirements

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course "**Epizootology and infectious diseases**" 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 course "**Epizootology and infectious diseases**".

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

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
GPC-6	Capable of analyzing, identifying, and assessing the risk of disease emergence and spread	Veterinary genetics Animal health and welfare Pathological physiology	Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam
PC-6	Ability to diagnose and predict the course and spread of disease based on clinical, laboratory, and instrumental diagnostic data, as well as additional diagnostic	Pathological anatomy Obstetrics, gynecology and andrology Internal diseases General surgery Private Veterinary	Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project

	methods.	Surgery Parasitology and invasive diseases	Preparation for and passing the state exam
PC-11	Ability to develop an annual plan of anti-epizootic measures, plan of prevention of non-communicable diseases of animals, plan of veterinary and sanitary measures, including a plan of preventive immunizations (vaccinations) and therapeutic and prophylactic treatments.		Veterinary sanitation Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam

4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the course "Epizootology and infectious diseases" is 10 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	8	9	-	
Contact academic hours	156	51	54	51	-	
including						
Lectures	52	17	18	17	-	
Lab work	104	34	36	34	-	
Seminars (workshops/tutorials)	-	-	-	-	-	
Self-study	154	37	44	73	-	
Evaluation and assessment (exam/pass/fail grading)	50	20	10	20	-	
Course workload	Academic hour	360	108	108	144	-
	Credit unit	10	3	3	4	-

5. COURSE CONTENTS

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

Modules	Content of the modules (topics)	Types of academic activities
Module 1. General epizootology. Introduction to epizootology and infectology.	Topic 1.1. Introduction to veterinary infectology.	Lectures, Lab work.
	Topic 1.2. General principles of the approach to working with animals in case of suspected infectious disease.	Lectures, Lab work.
	Topic 1.3. Logistics and equipment.	Lectures, Lab work.
	Topic 1.4. Epizootological examination of the object.	Lectures, Lab work.
	Topic 1.5. Rules for the collection of pathological material.	Lectures, Lab work.
Module 2. The concept of the epizootic process.	Topic 2.1. Epizootic chain.	Lectures, Lab work.
	Topic 2.2. The driving forces of the epizootic process.	Lectures, Lab work.
	Topic 2.3. Sources of the pathogen.	Lectures, Lab work.
	Topic 2.4. Mechanisms of pathogen transmission.	Lectures, Lab work.
Module 3. Infection and immunity.	Topic 3.1. The doctrine of infection. Infectious process.	Lectures, Lab work.
	Topic 3.2. The importance of a microorganism in the development of infection and its pathogenicity. Forms of infection.	Lectures, Lab work.
	Topic 3.3. The immune system of the animal body.	Lectures, Lab work.
	Topic 3.4. Anti-infectious immunity.	Lectures, Lab work.
Module 4. Diagnosis of infectious diseases.	Topic 4.1. Epizootological diagnostics of infectious diseases.	Lectures, Lab work.
	Topic 4.2. Clinical diagnosis of infectious diseases.	Lectures, Lab work.
	Topic 4.3. Pathomorphological diagnostics of infectious diseases.	Lectures, Lab work.
	Topic 4.4. Allergic diagnostics of infectious diseases.	Lectures, Lab work.
	Topic 4.5. Laboratory diagnostics of infectious diseases.	Lectures, Lab work.
	Topic 4.6. Serological diagnostics of infectious diseases	Lectures, Lab work.

	Topic 4.7. Virological diagnostics of infectious diseases.	Lectures, Lab work.
Module 5. Antiepidemiological and preventive measures.	Topic 5.1. Principles of antiepidemiological work.	Lectures, Lab work.
	Topic 5.2. Veterinary and sanitary rules for the prevention and control of infectious diseases of animals.	Lectures, Lab work.
	Topic 5.3 General prevention.	Lectures, Lab work.
	Topic 5.4. Specific prevention.	Lectures, Lab work.
	Topic 5.5. Principles of treatment of infectious diseases of animals.	Lectures, Lab work.
Module 6. Private epidemiology. Classification of infectious diseases.	Topic 6.1. Classification of infectious diseases.	Lectures, Lab work.
	Topic 6.2. Natural focal infections.	Lectures, Lab work.
Module 7. Especially dangerous infectious diseases of animals.	Topic 7.1. Diseases common to animals of different species.	Lectures, Lab work.
	Topic 7.2. Animal diseases in the city.	Lectures, Lab work.
	Topic 7.3. Anthroponoses.	Lectures, Lab work.
Module 8. Infectious diseases of ruminants.	Topic 8.1. Infectious diseases of cattle.	Lectures, Lab work.
	Topic 8.2. Infectious diseases of small cattle.	Lectures, Lab work.
	Topic 8.3. Infectious diseases of camels.	Lectures, Lab work.
Module 9. Infectious diseases of horses.	Topic 9.1. Infectious diseases of horses.	Lectures, Lab work.
Module 10. Infectious diseases of pigs.	Topic 10.1. Infectious diseases of pigs.	Lectures, Lab work.
Module 11. Infectious diseases of young animals.	Topic 11.1. Infectious diseases of young ruminants.	Lectures, Lab work.
	Topic 11.2. Infectious diseases of young horses.	Lectures, Lab work.
	Topic 11.3. Infectious diseases of young pigs.	Lectures, Lab work.
	Topic 11.4. Infectious diseases of young unproductive animals.	Lectures, Lab work.
Module 12. Infectious diseases of birds.	Topic 12.1. Infectious diseases of birds.	Lectures, Lab work.
Module 13. Infectious diseases of carnivores.	Topic 13.1. Infectious diseases of dogs.	Lectures, Lab work.

	Topic 13.2. Infectious diseases of cats.	Lectures, Lab work.
	Topic 13.3. Infectious diseases of fur-bearing animals.	Lectures, Lab work.
Module 14. Infectious diseases of fish.	Topic 14.1. Infectious diseases of fish.	Lectures, Lab work.
Module 15. Infectious diseases of bees.	Topic 15.1. Infectious diseases of bees.	Lectures, Lab work.
Module 16. Slow animal infections.	Topic 16.1. Infectious diseases of animals caused by prions.	Lectures, Lab work.
Module 17. Infectious diseases of animals caused by rickettsia and chlamydia.	Topic 17.1. Infectious diseases of animals caused by rickettsias	Lectures, Lab work.
	Topic 17.2. Infectious diseases of animals caused by chlamydia.	Lectures, Lab work.

6. COURSE EQUIPMENT 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 course (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.	-
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	-
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. RESOURCES RECOMMENDED FOR COURSE STUDIES

Main readings:

1. Fundamentals of infectious diagnostics: textbook / V. V. Makarov, D.A. Lozovoy, V. I. Belousov, A. K. Petrov. - Vladimir: FGBI "VNIIZH", 2019. -137 p.: ill. - ISBN 978-5-900026-71-8.
2. Epizootology with microbiology: textbook / Edited by V. A. Kuzmin, A.V. Svyatkovsky. - 2nd ed., stereotype. - St. Petersburg: Lan, 2017. - 430 p.: ill. - (Textbooks for universities. Special literature). - ISBN 987-5-8114-2017-9: 1760.00.<http://lib.rudn.ru/MegaPro/Web>
3. Makarov, Vladimir Vladimirovich. Epizootological research method: textbook for universities / V. V. Makarov, A.V. Svyatkovsky; V.V.Makarov et al. - Electronic text data. - St. Petersburg: Lan, 2009. - 224 p.: ill. - (Textbooks for universities. Special literature). - ISBN 978-5-8114-0903-7: 269.94. <http://lib.rudn.ru/MegaPro/Web>

Additional Readings:

1. Gruzdev K.N. Rabies of animals: monograph / K.N. Gruzdev, A.E. Metlin. - Vladimir: FGBI "VNIIZH", 2019. - 393 p.: ill. - ISBN 978-5-900026-73-2:.
2. Timofeev Boris Alexandrovich. Trypanosomiasis of animals: a textbook / B. A. Timofeev, V. G. Menshikov. - M.: Zoomedlit, 2009. - 118 p. -(Textbooks and manuals for students of higher education. studies. establishments). - ISBN 978-5-91233-005-9.
3. Makarov, Vladimir Vladimirovich. The OIE list of animal diseases and cross-border infections: a textbook for a lecture course on the course "Epizootology and infectious diseases" / V. V. Makarov. - M.: Publishing House of RUDN, 2009. - 140 p.: ill. - Appendix: CD.<http://lib.rudn.ru/MegaPro/Web>

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/](https://www.yandex.ru/)
- Google search engine <https://www.google.ru/>
- Scopus abstract database <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 course "**Epizootology and infectious diseases**".
2. Laboratory workshop on the course "**Epizootology and infectious diseases**".

* - The training toolkit and guidelines for the internship are placed on the internship page in the university telecommunication training and information system under the set procedure.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL AS COURSE RESULTS

The assessment toolkit and the grading system* to evaluate the level of competences (competences in part) formation as the course results are specified in the Appendix to the course syllabus.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

DEVELOPER:

Professor of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

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Full name.

HEAD OF EDUCATIONAL DEPARTMENT:

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