

Документ подписан простой электронной подписью
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**Federal State Autonomous Educational Institution of Higher Education
Peoples' Friendship University of Russia named after Patrice Lumumba
RUDN University**

Agrarian and Technological Institute

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

COURSE SYLLABUS

Epidemiology 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:**

Veterinary

higher education programme profile/specialisation title

1. COURSE GOAL(s)

The goal of the course «**Epidemiology 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 antiepidemic and preventive measures aimed at their prevention, reduction of infectious diseases of animals and elimination of individual infections.

2. REQUIREMENTS FOR LEARNING OUTCOMES

1) Mastering the course (module) «**Epidemiology and Infectious Diseases**» is aimed at the development of the following competences /competences in part:

Table 2.1. List of competences that students acquire through the course study

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-6	Ability to analyze, identify and assess the risk of occurrence and spread of diseases	GPC-6.1. Possesses knowledge in the field of etiology and pathogenesis of diseases in animals of different species.
		GPC-6.2. Knows the patterns of occurrence and spread of diseases in animal populations, predisposing factors and causes of possible complications.
PC-6	Ability to establish a diagnosis and prognosis of disease development and spread based on clinical, laboratory and instrumental diagnostic data.	PC-6.1. Possesses knowledge of manifestations of infectious, parasitic, internal non-infectious, surgical, gynecological and other animal diseases.
		PC-6.2. Uses methods for establishing a comprehensive diagnosis based on medical history, clinical examination and diagnostic studies.
		PC-6.3. Applies methods for predicting the course and outcome of treatment considering accompanying diagnoses and complicating factors.
		PC-6.4. Assesses risks of disease spread.
PC-11	Ability to develop annual anti-epizootic, preventive and veterinary-sanitary plans.	PC-11.1. Conducts epizootological assessment of enterprises or territories.
		PC-11.2. Develops annual anti-epizootic and preventive programs.
		PC-11.3. Develops vaccination plans considering epizootic conditions.

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GPC-6	Ability to analyze, identify and assess the risk of occurrence and spread of diseases	Animal Health and Welfare Pathologic Physiology	Veterinary Genetics Здоровье и благополучие животных / Animal Health and Welfare Clinical Industrial Practice
PC-6	Ability to establish a diagnosis and prognosis of disease development and spread based on clinical, laboratory and instrumental diagnostic data.	Obstetrics, Gynecology and Andrology Internal Diseases General Surgery Private Surgery Parasitology and Invasive Diseases	Clinical Internship Industrial Research Practice
PC-11	Ability to develop annual anti-epizootic, preventive and veterinary-sanitary plans.	Veterinary Sanitation	Clinical Industrial Practice Clinical Internship Industrial Research Practice

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is 10 credits (360 academic hours).

*Table 4.1. Types of academic activities during the periods of higher education programme mastering (**full-time training**)*

Type of academic activities	Total academic hours	Semesters/training modules				
		7	8	9	-	
<i>Contact academic hours</i>	153	51	51	51	-	
including:						
Lectures (LC)	51	17	17	17	-	
Lab work (LW)	102	34	34	34	-	
Seminars (workshops/tutorials) (S)	-	-	-	-	-	
<i>Self-studies</i>	150	37	38	75	-	
<i>Evaluation and assessment (exam/passing/failing grade)</i>	57	20	19	18	-	
Course workload	academic hours	360	108	108	144	-
	credits	10	3	3	4	-

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
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, work.	Lab
	Topic 5.4. Specific prevention.	Lectures, work.	Lab
	Topic 5.5. Principles of treatment of infectious diseases of animals.	Lectures, work.	Lab
Module 6. Private epizootology. Classification of infectious diseases.	Topic 6.1. Classification of infectious diseases.	Lectures, work.	Lab
	Topic 6.2. Natural focal infections.	Lectures, work.	Lab
Module 7. Especially dangerous infectious diseases of animals.	Topic 7.1. Diseases common to animals of different species.	Lectures, work.	Lab
	Topic 7.2. Animal diseases in the city.	Lectures, work.	Lab
	Topic 7.3. Anthroozoonoses.	Lectures, work.	Lab
Module 8. Infectious diseases of ruminants.	Topic 8.1. Infectious diseases of cattle.	Lectures, work.	Lab
	Topic 8.2. Infectious diseases of small cattle.	Lectures, work.	Lab
	Topic 8.3. Infectious diseases of camels.	Lectures, work.	Lab
Module 9. Infectious diseases of horses.	Topic 9.1. Infectious diseases of horses.	Lectures, work.	Lab
Module 10. Infectious diseases of pigs.	Topic 10.1. Infectious diseases of pigs.	Lectures, work.	Lab
Module 11. Infectious diseases of young animals.	Topic 11.1. Infectious diseases of young ruminants.	Lectures, work.	Lab
	Topic 11.2. Infectious diseases of young horses.	Lectures, work.	Lab
	Topic 11.3. Infectious diseases of young pigs.	Lectures, work.	Lab
	Topic 11.4. Infectious diseases of young unproductive animals.	Lectures, work.	Lab
Module 12. Infectious diseases of birds.	Topic 12.1. Infectious diseases of birds.	Lectures, work.	Lab
Module 13. Infectious diseases of carnivores.	Topic 13.1. Infectious diseases of dogs.	Lectures, work.	Lab
	Topic 13.2. Infectious diseases of cats.	Lectures, work.	Lab
	Topic 13.3. Infectious diseases of fur-bearing animals.	Lectures, work.	Lab
Module 14. Infectious diseases of fish.	Topic 14.1. Infectious diseases of fish.	Lectures, work.	Lab
Module 15. Infectious diseases of bees.	Topic 15.1. Infectious diseases of bees.	Lectures, work.	Lab
Module 16. Slow animal infections.	Topic 16.1. Infectious diseases of animals caused by prions.	Lectures, work.	Lab
Module 17. Infectious diseases of animals caused	Topic 17.1. Infectious diseases of animals caused by rickettsias	Lectures, work.	Lab

by rickettsia and chlamydia.	Topic 17.2. Infectious diseases of animals caused by chlamydia.	Lectures, work.	Lab
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6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lecture	A lecture hall for lecture-type classes, equipped with a set of specialised furniture; board (screen) and technical means of multimedia presentations.	
Lab work	A classroom for laboratory work, individual consultations, current and mid-term assessment; equipped with a set of specialised furniture and machinery.	
Self-studies	A classroom for independent work of students (can be used for seminars and consultations), equipped with a set of specialised furniture and computers with access to the electronic information and educational environment.	

7. RESOURCES RECOMMENDED FOR COURSE STUDY

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/>
- Google search engine <https://www.google.ru/>
- Scopus abstract database <http://www.elsevier.com/locate/scopus/>

*Training toolkit for self- studies to master the course *:*

1. The set of lectures on the course «**Epidemiology and Infectious Diseases**».
2. The laboratory workshop (if any) on the course «**Epidemiology and Infectious Diseases**».

* The training toolkit for self- studies to master the course is placed on the course page in the university telecommunication training and information system under the set procedure.

DEVELOPER:

Professor of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

Rudenko P.A.

Full name.

HEAD OF EDUCATIONAL DEPARTMENT:

Department of Veterinary Medicine

Name Basic Curriculum

Signature

Vatnikov Yu.A.

Full name.

HEAD OF

HIGHER EDUCATION PROGRAMME:

Director of the Department of Veterinary Medicine

Position, Basic curriculum

Signature

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