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

Neurology

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

2025

1. GOALS AND OBJECTIVES OF THE COURSE

The aim of the mastering the course "**Neurology**" is to develop in students a set of knowledge and practical skills necessary for the recognition and differential diagnosis of neurological diseases, the interpretation of neurological symptoms, as well as for selecting the optimal treatment strategy and carrying out the prevention of nervous system diseases in animals.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The implementation of the course "**Neurology**" 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)
PC-3	Ability to plan differential diagnosis activities for a patient.	PC-3.1 Systematizes information on symptoms/syndromes of the disease in the patient, forming a set of preliminary diagnoses for their further confirmation or refutation.
		PC-3.2 Uses an existing or develops a unique algorithm for differential diagnosis, taking into account the capabilities of the medical institution.
		PC-3.3 Uses the information obtained from diagnostic procedures to establish a final diagnosis (or diagnoses) and to adjust the established diagnoses if necessary.
PC-5	Ability and readiness to plan and conduct necessary types of instrumental diagnostics of the patient's condition.	PC-5.2 Selects the necessary and sufficient set of instrumental diagnostic methods to solve the assigned task.
		PC-5.3 Is able to perform instrumental diagnostics of animal diseases.
		PC-5.4 Interprets diagnostic results and uses them to solve the assigned task.
PC-7	Ability to choose or develop a treatment plan for a patient based on the established diagnosis.	PC-7.1 Is able to select medications necessary for treating animals, guided by evidence-based medicine principles and considering the combined pharmacological effects of all prescribed drugs on the organism.
		PC-7.2 Is able to choose the optimal method of drug administration, calculate the dose and frequency of administration,

		and determine the duration of each drug course.
		PC-7.3 Is able to select non-drug, including physiotherapeutic, methods of influence on the organism of the sick animal, which contribute to its recovery, and apply them in treatment.
		PC-7.4 Is able to develop a patient treatment plan, select criteria for monitoring its effectiveness, and determine alternative treatment plans if the initially chosen treatment methods are ineffective.

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course "**Neurology**" 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 course "**Neurology**".

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*
PC-3	Ability to plan differential diagnosis activities for a patient.	Obstetrics, Gynecology and Andrology / Акушерство, гинекология и андрология Internal Diseases / Внутренние незаразные болезни General Surgery / Общая хирургия Private Surgery / Частная ветеринарная хирургия Parasitology and Invasive Diseases /	Nephrology / Нефрология Anesthesiology, Resuscitation And Intensive Therapy / Анестезиология, реанимация и интенсивная терапия Reconstructive Surgery / Реконструктивно-восстановительная хирургия Veterinary Ophthalmology /

		Паразитология и инвазионные болезни	Ветеринарная офтальмология
		Dermatology / Дерматология	Behavioral Medicine / Поведенческая медицина
		Cardiology / Кардиология	Animal Dentistry / Стоматология животных
		Endocrinology / Эндокринология	Variable component / Вариативная компонента
		Oncology / Онкология	Clinical Industrial Practice / Клиническая производственная практика
			Clinical Internship
			Industrial Research Practice / Производственно-исследовательская практика
			Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена
			Preparing and Passing the State Exam / Подготовка и сдача государственного экзамена
			Design, Preparation for Defense Procedure and Defense of the Graduation Thesis / Оформление,

			подготовка к процедуре защиты и защита выпускной квалификационной работы
PC-5	Ability and readiness to plan and conduct necessary types of instrumental diagnostics of the patient's condition.	Instrumental Diagnostic Methods with Elements of Artificial Inteligence Technology / Инструментальные методы диагностики с элементами технологии искусственного интеллекта Dermatology / Дерматология Cardiology / Кардиология Endocrinology / Эндокринология Oncology / Онкология	Nephrology / Нефрология Reconstructive Surgery / Реконструктивно-восстановительная хирургия Veterinary Ophthalmology / Ветеринарная офтальмология Animal Dentistry / Стоматология животных Variable component / Вариативная компонента Clinical Industrial Practice / Клиническая производственная практика Clinical Internship Industrial Research Practice / Производственно-исследовательская практика Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена

			Preparing and Passing the State Exam / Подготовка и сдача государственного экзамена Design, Preparation for Defense Procedure and Defense of the Graduation Thesis / Оформление, подготовка к процедуре защиты и защита выпускной квалификационной работы
PC-7	Ability to choose or develop a treatment plan for a patient based on the established diagnosis.	Dermatology / Дерматология Cardiology / Кардиология Endocrinology / Эндокринология Oncology / Онкология	Nephrology / Нефрология Anesthesiology, Resuscitation And Intensive Therapy / Анестезиология, реанимация и интенсивная терапия Behavioral Medicine / Поведенческая медицина Variable component / Вариативная компонента Clinical Industrial Practice / Клиническая производственная практика Clinical Internship Industrial Research Practice / Производственно-исследовательская

			практика
			Preparation for Passing and Passing the State Exam / Подготовка к сдаче и сдача государственного экзамена
			Preparing and Passing the State Exam / Подготовка и сдача государственного экзамена
			Design, Preparation for Defense Procedure and Defense of the Graduation Thesis / Оформление, подготовка к процедуре защиты и защита выпускной квалификационной работы

4. COURSE WORKLOAD AND TRAINING ACTIVITIES

Course workload of the course "**Neurology**" is 2 credits.

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

Type of academic activities		Total academic hours	Semesters/training modules			
			9	**-**	**-**	**-**
Contact academic hours		51	51	-	-	-
including						
Lectures		17	17	-	-	-
Lab work		34	34	-	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		1	1	-	-	-
Evaluation and assessment (exam/pass/fail grading)		20	20	-	-	-
Course workload	academic hours_	**72**	**72**	**-**	**-**	-

	credits	**2**	**2**	**-**	**-**	-

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 Information about the Nervous System	Topic 1.1. Methods of nervous system examination in animals.	Lectures, Lab work.
	Topic 1.2. Methods of nervous system examination in animals. Basics of neurophysiology: nerve impulse transmission, reflexes, autonomic regulation	Lectures, Lab work.
Module 2. Pathophysiology and Symptoms of Neurological Disorders	Topic 2.1. Sensory, motor function, and coordination disorders.	Lectures, Lab work.
	Topic 2.2. Seizure syndromes, paralysis, ataxia.	Lectures, Lab work.
	Topic 2.3. Behavioral disorders in CNS lesions. Evaluation of cranial nerve function.	Lectures, Lab work.
Module 3. Diagnosis of Neurological Diseases	Topic 3.1. Clinical and neurological examination.	Lectures, Lab work.
	Topic 3.2. Imaging techniques: X-ray, MRI, CT, myelography.	Lectures, Lab work.
	Topic 3.3. Laboratory and functional methods (CSF analysis, EEG, electromyography).	Lectures, Lab work.

6. COURSE EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the discipline

Classroom for Academic Activity Type	*Equipping the classroom*	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. Denisenko V. N., Gnezdilova L. A., Kruglova Yu. S., Abramov P. N. Diseases of the Nervous System in Animals: A Textbook. — St. Petersburg: Lan, 2023. — 320 p. ISBN: 978-5-8114-9209-0

2. Lorenz M. D., Coates J. R., Kent M. Handbook of Veterinary Neurology. — St. Petersburg: SPbVO, 2015. — 672 p. ISBN: 978-5-9902878-1-5

Additional Readings:

1. Chrisman S., Mariani C., Platt S., Clemons R. Neurology of Dogs and Cats: A Complete Guide for Practicing Veterinarians. — Moscow: Aquarium-Print, 2016. — 448 p. ISBN: 978-5-4238-0297-4

2. Wheeler S. J., Thomas W. B. Small Animal Neurology: A Colour Handbook in Questions and Answers. — Moscow: Aquarium-Print, 2018. — 224 p. ISBN: 978-5-4238-0397-1

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.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 "**Neurology**".
2. Laboratory workshop on the course "**Neurology**".
∗ - 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		Vatnikov Yu.A.
Position, Basic curriculum	Signature	Full name.

HEAD OF EDUCATIONAL DEPARTMENT:

Department of Veterinary Medicine		Vatnikov Yu.A.
Name Basic Curriculum	Signature	Full name.

HEAD OF EDUCATIONAL DEPARTMENT:

Director of the Department of Veterinary Medicine		Vatnikov Yu.A.
Position, Basic curriculum	Signature	Full name