

# SYLLABUS OF THE EDUCATIONAL COMPONENT



## VACCINOLOGY IN VETERINARY MEDICINE

speciality	211 – Veterinary Medicine	Discipline status	selective
Field of knowledge	ветеринарна медицина	Faculty	Veterinary Medicine
educational level	Not limited	department	Department of epizootology and microbiology

### TEACHER

#### Harahulya Halina



Higher education - veterinary medicine specialty

Scientific degree - candidate of veterinary sciences, specialty 16.00.03-veterinary microbiology, virology and immunology

Academic title - associate professor

Work experience - 24 years

Indicators of professional activity on the subject of the course:

- author of 12 methodological developments;
- 22 years of experience in scientific work;
- participant of scientific and methodical conferences.

Tel.	0661333555	e-mail	vetvir.galina@gmail.com	remote support	Moodle
------	------------	--------	-------------------------	----------------	--------

Candidates of veterinary sciences, Basko Sabina, are involved in the teaching of the discipline

## GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT (DISCIPLINE)

<b>The purpose of the discipline</b>	"Vaccinology in veterinary medicine" is to provide students with the necessary theoretical knowledge about vaccines, their types and properties, as well as practical skills in the selection and use of vaccines for the specific prevention of viral, bacterial and fungal diseases of animals of various species.
<b>Format</b>	lectures, practical employment (occupations), self-contained work of students, consultations.
<b>Detailing of learning results and forms of their control</b>	<ul style="list-style-type: none"> <li>• the ability to observe the rules of personal safety when researching animals, using knowledge about their fixation, follow the rules of personal hygiene, use the rules of asepsis and antiseptics when carrying out any intervention or research</li> <li>• the ability to conduct research at an appropriate level, apply knowledge in practical situations, use tools, special devices for carrying out special manipulations during the performance of professional tasks</li> <li>• ability to carry out vaccination by enteral and parenteral methods</li> <li>• understand and find out the specifics of conducting clinical research in order to form conclusions about the condition of the animal and establish the effectiveness of vaccination</li> <li>• ability to abstract thinking, analysis, synthesis, search, processing of information from various sources</li> </ul>
<b>Scope and forms of control</b>	3 ECTS credits (90 hours): 14 hours of lectures, 16 hours of laboratory-practical classes; 60 hours of self-study, modular control (2 modules); final control - differentiated assessment.
<b>The teacher's requirements</b>	timely completion of tasks, activity, teamwork
<b>Enrollment conditions</b>	"free enrollment"

## COMPLEMENTS THE STANDARD OF EDUCATION AND THE EDUCATIONAL PROGRAM

<b>Competences</b>	<ol style="list-style-type: none"> <li>1. Ability to think abstractly, analyze and synthesize, search, process information from various sources.</li> <li>2. Ability to apply knowledge in practical situations.</li> <li>3. The ability to conduct research at the appropriate level, make informed decisions, evaluate and ensure the quality of the work performed.</li> <li>4. The ability to understand and find out the peculiarities of the structure and functioning of cells, tissues, organs, their systems and apparatuses of the animal body.</li> <li>5. The ability to observe the rules of safety, asepsis and antiseptics during professional activities.</li> </ol>	<b>Program learning outcomes</b>	<ol style="list-style-type: none"> <li>1. PRN 7. Collect anamnestic data during registration and examination of animals, find solutions regarding the choice of effective methods of prevention of animal diseases.</li> <li>2. PRN 8. Explain the essence and dynamics of the development of physiological processes that occur in the body of animals under the influence of environmental factors and the action of infectious agents.</li> </ol>
--------------------	--	----------------------------------	--

- 7. The ability to conduct clinical research in order to formulate conclusions about the condition of animals or establish a diagnosis.
- 8. Ability to develop prevention strategies.
- 9. The ability to carry out professional activities within the chosen specialization.
- 10. Ability to plan, organize and implement measures for the treatment of diseases of small animals.

## STRUCTURE OF THE EDUCATIONAL COMPONENT (DISCIPLINES)

### Chapter 1 Theoretical foundations of veterinary vaccinology

Lecture 1	Introduction to vaccinology.	Practical classes 1 (PC 1)	Safety techniques when working in a microbiological laboratory. Methods of obtaining bacteria as vaccine antigens.	Самостійна робота	Essay on the history of vaccinology (the topic chosen by the student). Methods of inactivation in the development of vaccines. Attenuation methods in the development of vaccines. Genetic and molecular methods of obtaining vaccine antigens. Fundamentals of the rules of transportation, storage and use of vaccines.
Lecture 2	Immunological basis of vaccinology in veterinary medicine: immune response and immunological memory.				
Lecture 3	Types of vaccines and their features	PC 2	Methods of obtaining bacterial exotoxins and endotoxins.		
		PC 3	Methods of obtaining viral antigens (cultivation, accumulation and storage).		

### Модуль 2. Оцінка ефективності вакцинопрофілактики у ветеринарній медицині

Lecture 4	Requirements for vaccines and methods of assessment of the main indicators of their quality.	PC 4	Types of vaccines for various farm and domestic animals.	Самостійна робота	Comparative characteristics of bacterial veterinary vaccines. Comparative characteristics of viral veterinary vaccines. Examples of vaccine prophylaxis schemes of a certain species of animals (the topic of the student's choice). Types of other immunobiological
Lecture 5	Basic methodological approaches to the use of vaccines.	PC 5	Methods of using vaccines.		
Lecture 6	Causes of complications and ineffectiveness of vaccine prophylaxis.	PC 6	Laboratory methods of studying the properties of vaccines.		

Lecture 7	Other types of immunobiological drugs and their use	PC 7	Vaccination of various types of animals.		drugs (except vaccines). Directions for the development of new immune drugs against non-infectious diseases (probiotics, allergy vaccines, against autoimmune diseases)
		PC 8	Obtaining and using non-vaccine types of immunological drugs.		
		PC 9	Final class. Test		

### BASIC LITERATURE AND METHODOLOGICAL MATERIALS

<p><b>Veterinary Vaccines: Principles and Applications / Edited by Samia Metwally, Ahmed El Idrissi. // Ahmed El Idrissi, 2021. – 442p.</b></p> <p><b>Vaccinology: An Essential Guide / Editor(s): Gregg N. Milligan PhD,, Alan D.T. Barrett PhD // First published:5 December 2014. Print ISBN:9780470656167   Online ISBN:9781118638033   DOI:10.1002/9781118638033.</b></p> <p><b>The Vaccine Book / Edited by Barry R. Bloom, Paul-Henri Lambert. - Second Edition. - Academic Press is an imprint of Elsevier. – 2016. – 610p.</b></p>	<p><b>Electronic information resources</b></p> <ol style="list-style-type: none"> <li><a href="https://www.youtube.com/watch?v=o55r09egthg">https://www.youtube.com/watch?v=o55r09egthg</a></li> <li><a href="https://biomolecula.ru/articles/mir-do-i-posle-izobreteniiia-vaktsin">https://biomolecula.ru/articles/mir-do-i-posle-izobreteniiia-vaktsin</a></li> <li><a href="https://www.youtube.com/watch?v=EjmOYv9hr3wю">https://www.youtube.com/watch?v=EjmOYv9hr3wю</a></li> <li><a href="https://www.youtube.com/watch?v=QypCN2ENmgE">https://www.youtube.com/watch?v=QypCN2ENmgE</a></li> <li><a href="https://www.youtube.com/watch?v=vIRRODY7CrM">https://www.youtube.com/watch?v=vIRRODY7CrM</a> <a href="https://www.youtube.com/watch?v=r4-Y81aJhso">https://www.youtube.com/watch?v=r4-Y81aJhso</a></li> </ol>
---	--

### EVALUATION SYSTEM

	System	points	ACTIVITY TO BE EVALUATED
Final assessment	100 ECTS points (standard)	up to 50	50% of the average grade for the modules
		up to 50	final testing
Modular assessment	100 points total	up to 50	answers to test questions
		up to 20	oral answers in laboratory-practical classes
		up to 30	the result of mastering the block of independent work

### NORMS OF ACADEMIC ETHICS AND CHARITY

All participants in the educational process (including those seeking education) must adhere to the code of academic integrity and the requirements prescribed in the provision "On academic integrity of participants in the educational process of DBTU": show discipline, education, respect each other's dignity, show kindness, honesty, responsibility