

**Thematic plan of seminar-type classes
in discipline « Microbiology »
for students of 2024 year of admission
under the educational programme
33.05.01 Pharmacy,
specialisation (profile) Pharmacy
(Specialist's degree),
form of study full-time
for the 2025-2026 academic year**

№	Thematic blocks	Hours (academic) ³
3 semester		
1.	Introduction in medical microbiology ¹ . Material and methods of laboratory diagnosis. General characteristics of the causative agents of bacterial intestinal infections. General properties of the Family Enterobacteriaceae. ²	4
2.	The causative agents of bacterial intestinal infections. ¹ Escherichia coli: biological properties, epidemiology, pathogenesis and clinical syndromes. Laboratory diagnosis, treatment and prophylaxis of diseases. Causative agents of bacterial dysentery – Shigella: biological properties, epidemiology, pathogenesis and clinical syndromes. Laboratory diagnosis, treatment and prophylaxis of diseases. ²	4
3.	Salmonella spp. – causative agents of typhoid fever and paratyphoid fever. ¹ Salmonella food-poisoning. Biological properties, epidemiology, pathogenesis and clinical syndromes. Laboratory diagnosis, treatment and prophylaxis of diseases. ²	4
4.	Cholera. Biological properties of V. cholerae, classification. Epidemiology pathogenesis and clinical syndromes. Laboratory diagnosis, treatment and prophylaxis of disease. ²	4
5.	Concluding session.	4
6.	General characteristics of the causative agents of purulent coccal infections. ¹ Biological properties of Staphylococcus spp.,	4

	<p>Streptococcus spp., Pneumococcus, Meningococcus and Gonococcus.</p> <p>Epidemiology, pathogenesis and clinical syndromes. Laboratory diagnosis, treatment and prophylaxis of diseases.²</p>	
7.	<p>Causative agents of diphtheria and whooping cough.¹</p> <p>Causative agent of diphtheria: biological properties, factors of pathogenicity, clinical forms of diseases, laboratory diagnosis, treatment and prophylaxis.</p> <p>Whooping cough. B. pertussis and B. parapertussis: biological properties, factors of pathogenicity, clinical forms of diseases, laboratory diagnosis, treatment and prophylaxis.²</p>	4
8.	<p>Mycobacteria.¹ M. tuberculosis: biological properties, factors of pathogenicity, clinical forms of diseases, laboratory diagnosis, treatment and prophylaxis.</p> <p>M. leprae: biological properties, factors of pathogenicity, clinical forms of diseases, laboratory diagnosis, treatment and prophylaxis.²</p>	4
9.	Concluding session.	4
10.	<p>Anthrax, Plaque, Tularemia, Brucellosis.¹</p> <p>Biological properties of the causative agents. Epidemiology, pathogenesis and clinical syndromes of diseases, principles of laboratory diagnosis, treatment and prophylaxis.²</p>	4
11.	<p>Anaerobic infections: gas gangrene, tetanus, botulism.¹</p> <p>Biological properties of the causative agents. Epidemiology, pathogenesis and clinical syndromes of diseases, principles of laboratory diagnosis, treatment and prophylaxis.²</p>	4
12.	<p>Pathogenic spirochetes.¹ Leptospira, Treponema, Borrelia: biological properties, factors of pathogenicity, clinical forms of diseases, laboratory diagnosis, treatment and prophylaxis.</p> <p>Pathogenic Mycoplasmas, Chlamydiae, Rickettsiae and Fungi: their role in human pathology, principles of laboratory diagnosis.²</p>	4
13.	Concluding session.	4
14.	<p>Causative agents of respiratory viral infections: Orthomyxoviruses, Paramyxoviruses, Adenoviruses, Herpesviruses.¹</p> <p>Taxonomy, biological properties, epidemiology, pathogenesis, laboratory diagnosis.²</p>	4

15.	RNA-viruses: Picornaviruses, Togaviruses, Rabdoviruses, Rotaviruses. ¹ Taxonomy, biological properties, epidemiology, pathogenesis, laboratory diagnosis. ²	4
16.	Viral hepatitis: HAV, HEV, HBV, HCV, HDV. ¹ Taxonomy, biological properties, epidemiology, pathogenesis, laboratory diagnosis. Human immunodeficiency virus: taxonomy, biological properties, replication cycle, antigens, laboratory diagnosis. Oncogenic viruses. ²	4
17.	Concluding session.	4
	Total	68

¹ – topic

² – essential content

³ – one thematic block includes several classes, the duration of one class is 45 minutes, with a break between classes of at least 5 minutes

Considered at the Microbiology department meeting, protocol of «11» June 2025 г. № 12.

Head of the Department



Professor Stepanenko I.S.

