

“Затверджено”

на засіданні кафедри

01.01.2024 р., протокол №10

**TIMETABLE OF THE PRACTICAL CLASSES OF MICROBIOLOGY  
FOR MEDICAL FACULTY  
(Spring semester 2023-2024)  
(68 hours)**

№	Topic	Gr.43
1	Organization of bacteriological laboratory. The microscopic method of investigation. Simple methods of staining.	06.02
2	Microscopic method of investigation. Ultrastructure of bacterial cell. Complex methods of staining. Gram`s, Ziehl-Neelsen`s staining.	07.02
3	Microscopic methods of investigation. Negative staining. Ultrastructure of bacterial cell.	13.02
4	Nutrient media for cultivation of microorganisms. Sterilization. Isolation of pure culture of bacteria.	20.02
5	Grows and multiplication of microorganisms. Isolation of pure culture of bacteria.	21.02
6	Grows and multiplication of microorganisms. Isolation of pure culture of bacteria. Enzymes of bacteria. Isolation of pure culture of anaerobes.	27.02
7	Isolation of pure culture of bacteria. Factors of pathogenicity of microorganisms. Genetic determinants of pathogenicity. Biological method in microbiology.	05.03
8	Immunity. Types of human body resistance to infectious diseases. The factors of a nonspecific resistance of an organism. Immune system of organism.	06.03
9	Specific resistance of an organism. Cellular and humoral immunity. Basis of transplantology.	12.03
10	Serological reactions.	19.03
11	Serological reactions with labels. Immunochromatographic analysis. Polymerase chain reaction.	20.03
12	Immunopathological conditions. Types of hypersensitivity. Allergodiagnosis. Immunocomplex pathology in transplantation immunity. Estimation of immune status of the human body.	26.03
13	Immunoprophylaxis and immunotherapy. Application of immunomodulators, immunostimulators, immunosuppressors. Using of immunobiological medications for treatment and prevention of immunopathology.	02.04
14	The phenomenon of antagonism of microorganisms. Microbiological basis of antimicrobial chemotherapy.	03.04
15	Antibiotics. Genetic basis of antibiotic resistance. BioPreparation	09.04
16	Morphology and ultrastructure of viruses. Methods of cultivation of viruses in the chick embryo and laboratory animals. Morphology of the human immunodeficiency virus (HIV-1, HIV-2).	16.04
17	Cell culture in virology. Methods of cultivation of viruses in the cell cultures. Indication of viral reproduction. Biology of HIV virus, life cycle. Serological reactions in virology. Serological tests for diagnosis of HIV-infection.	17.04
18	Virological diagnosis of Picornavirusesdiseases .	23.04
19	Virological diagnosis of Orthomyxoviruses and Paramyxoviruses diseases. Coronavirus. COVID-19	30.04
20	Virological diagnosis of HIV-infection and AIDS.	01.05
21	Virological diagnosis of hepatitis.	07.05
22	Virological diagnosis of Herpesviruses and Adenoviruses diseases.	14.05
23	Virological diagnosis of arboviruses infections. Tick-borne encephalitis viruses. Congo- Crimean haemorrhagic fever virus.	15.05

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## TIMETABLE OF LECTURES OF MICROBIOLOGY

### FOR MEDICAL FACULTY

(Spring semester 2023-2024)

(14 hours)

№	TOPIC	GROUP 43
1.	Subject and tasks of medical microbiology. Original methods of microbiological investigation. Morphology and classification of microorganisms. Physiology of microorganisms. Growth and reproduction of microorganisms. Bacterial physiology. Genetics of bacteria	08.02
2.	Infection and infectious process. Features of the COVID-19 pandemic.	22.02
3.	Immune system of organism. Non-specific resistance factors. Antigens and antibodies. Patterns of immune response. Immunopathological reactions. The main mechanisms of formation of the immune response in COVID-19.	07.03
4.	Immunoprevention and immunotherapy. Antimicrobial drugs.	21.03
5.	General virology. Morphology and ultrastructure of viruses. Subviral agents, prions. Cultivation of viruses. Enteroviruses: Hepatitis A, E	04.04
6.	Respiratory viral pathogens. Orthomyxoviruses. Paramyxoviruses. Coronaviruses SARS-CoV-2. COVID-19 pandemic. Adenoviruses	18.04
7.	Hepatitis viruses B, C, D. Herpesviruses. Retroviruses. AIDs. Viral oncogenesis	02.05

Tempor. appoint. head of the Department of Microbiology

assoc. prof. Roksolana Shykula

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**TIMETABLE OF SELF- EDUCATION WORKS OF MICROBIOLOGY  
FOR MEDICAL FACULTY  
(spring semester 2023-2024)**

(83 hours)

№	Types of self-education works	Quantity of hours	Control
1.	Evolution, bacterial classification	2	Current control on the practical classes 06.02-07.02
2.	The historical development of microbiological science. Stages of development of microbiology. The contribution of Ukrainian scientists	3	Current control on the practical classes 13.02-20.02
3	Fundamentals of Biotechnology of microorganisms	3	Current control on the practical classes 21.02-05.03
4	Features of the spread of the epidemic process in COVID-19.	2	Current control on the practical classes 05.03-06.03
5	Mechanisms of humoral and cell-mediated immune responses. Cell cooperation in immune response. Phenomenon of immunological memory and immunologic tolerance	6	Current control on the practical classes 06.03-12.03
6	Immunopathology. Congenital and acquired immunodeficiencies on COVID-19.	3	Current control on the practical classes 06.03-26.03
7	Methods of estimation of immune status of the human body.	3	Current control on the practical classes 06.03-26.03
8	Features of transplantation immunity	3	Current control on the practical classes 26.03-02.04
9	Current immunobiological preparations. Their applications. on COVID-19.	6	Current control on the practical classes 02.04-03.04
10	Mechanisms of bacterial resistance to antimicrobial agents	6	Current control on the practical classes 03.04-09.04
11	The importance of genetic diagnosis for recognition of viral infection. Polymerase chain reaction (qualitative and quantitative data analysis)	3	Current control on the practical classes 16.04-17.04
12	Viruses of especially dangerous tropical fevers (Lassa, Ebola, Marburg).	5	Current control on the practical classes 15.05
13	Causative agents of viral intestinal infections. Rotavirus, Calicivirus, Astrovirus.	3	Current control on the practical classes 23.04-07.05
14	Poxviruses, Parvoviruses, Pappiloma virus, Polyoma virus	6	Current control on the practical classes 1.05-14.04
15	Causative agents of slow viral infections.	6	Current control on the practical classes 14.05-15-05
16	Oncogenic viruses. Fundamentals of viral carcinogenesis.	5	Current control on the practical classes 07.07-14.05
17	Biology of HIV virus, life cycle. Serological tests for diagnosis of HIV-infection. Drugs for treatment and prevention	5	Current control on the practical classes 01.05
18	Coronaviruses. Severe acute respiratory syndrome (SARS). Flaviviruses (Zika virus)	5	Current control on the practical classes 30.04
19	Basics of sanitary virology.	3	Current control on the practical classes 01.05-07.05
20	Subviral agents, prions. Peculiarities of microbiological diagnostics of diseases.	3	Current control on the practical classes 16.04-17.04
21	Virus Genetics. Practical application of bacteriophage	2	Current control on the practical classes 16.04-17.04
	<b>TOTAL</b>	<b>83</b>	

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