

Approved by
Head of the Microbiology Department,
Professor Stepanenko I.S.



by protocol № 10, 30.01.2024

Syllabus of lectures
in «Microbiology» for the 1st year students within
English-speaking medium for the 2nd term for Pharmacy Faculty
2023-2024

№	Theme	Lecturer	Time
1	Introduction in a course of General Microbiology: the subject, purpose and tasks of study. Taxonomy and nomenclature of microorganisms. Morphology, ultrastructure and chemical composition of microbes. Bacterial ultrastructure. Complex methods of staining.	PhD Mikhailova L.V.	8:00 – 9:40 Microbiology department 01.02
2	Physiology of microorganisms: nutrition and respiration of microbes. Microbial growth and multiplication. Classification of culture media, their composition. Bacterial metabolism. Growth and reproduction of bacteria. Bacteriological method of research.	PhD Mikhailova L.V.	2h 08.02
3	Morphology and physiology of viruses. Classification of viruses, their structure. Interaction of virus with the cell. Cultivation of viruses. Methods of their study.	PhD Mikhailova L.V.	2h 15.02
4	Genetics of microorganisms. Organization of genetic material in bacteria: plasmids, IS, transposons. Modifications and mutations. Genetic recombinations. Biotechnology and genetic engineering.	PhD Mikhailova L.V.	2h 22.02
5	Sanitary microbiology: the microflora of water, air and soil. Sanitary-indicative microorganisms of water, air and soil. Normal flora of human body, its role. Dysbiosis: classification, conditions of its development.	PhD Mikhailova L.V.	2h 29.02
6	Microflora of medicinal plants, plant raw materials and medical forms. Phytopathogenic microorganisms.	PhD Mikhailova L.V.	2h 07.03
7	The influence of physical and chemical factors on microorganisms. Disinfection and sterilization. Chemical antimicrobial agents. Asepsis and antisepsis.	PhD Mikhailova L.V.	2h 14.03
8	The influence of biological factors on microorganisms Antibacterial agents: classifications. Bacterial resistance to antibiotics. Detection of bacterial susceptibility to antibiotics.	PhD Mikhailova L.V.	2h 21.03
9	Infection. Pathogenicity and virulence of bacteria. Infectious agents and their characteristics. Biological method of study.	PhD Mikhailova L.V.	2h 28.03

10	Immunity. Innate immunity. Nonspecific factors of antimicrobial resistance. Acquired immunity. Antigens and antibodies, their characteristics.	PhD Mikhailova L.V.	2h 04.04
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