



**PLAN OF MICROBIOLOGY
PRACTICAL CLASSES
FOR FOREIGN DEPARTMENT'S
STUDENTS**

**226 "Pharmacy" 2 course
(spring semester 2019-2020 academic year)**

№	Date	Topic	Volume in hours, type of classes	Method of grading	
				min	max
Module 1. General microbiology					
The concept of microbiology. Morphology of microorganisms. Physiology of microorganisms. Human microflora and the environment. The doctrine of infection.					
1	06.02	Classification of microorganisms. Microscopic techniques.	3, PW	-	-
2	13.02	Morphology and structure of bacteria. Tinctorial properties of microorganisms.	3, PW	2	3
3	20.02	Physiology of microorganisms. Chemical composition of bacterial cell. Nutrition and growth of bacteria. Methods of isolation and cultivation of aerobic and anaerobic bacteria. Enzymes of microbes. Respiration.	3, PW	2	3
4	27.02	Morphology and biology of viruses.	3, PW	2	3
5	05.03	Study about infection. A role of microbes, environment, social conditions in occurrence and development of infectious process. A sources of an infection, periods of development of infectious process. Mechanisms of transmission.	3, PW	2	3
6	12.03	The fundamentals of immunology. Innate (non-specific) and specific immunity. Immune system. The mechanism of the immune response. Antigens, antibodies.	3, PW	2	3
7	19.03	Immune reactions. Reactions using labeled antibodies and antigens, immunofluorescence (direct and indirect). ELISA	3, PW	2	3
8	26.03	Microorganisms and the environment. Controlling microbial growth in the environment.	3, PW	2	3

9	02.04	Control of module 1.	3, PW	4	9
Total M 1:				18	30
Module 2. General microbiology Phytopathogenic microorganisms. Microbial disruption of plant medicinal raw materials, microbial contamination of the finished dosage forms. The basics of chemotherapy. The doctrine of immunity. Immunodiagnostics, immunotherapy and immunoprophylaxis of infectious diseases. Allergy					
10	09.04	Effects of physical, chemical and biological factors on microorganisms. Asepsis, antisepsis, preservation, disinfection, sterilization. Disinfectants. Methods of sterilization.	3, PW	2	3
11	16.04	Phytopathogenic microorganisms.	3, PW	2	3
12	23.04	Microbial contamination of medicines Methods of the microbiological control.	3, PW	2	3
13	30.04	Antimicrobial chemotherapy. Basic groups of chemotherapeutic drugs, the mechanism of action, application. Side effects of antimicrobial medicines. Methods of definition of sensitivity of microorganisms to antibiotics.	3, PW	2	3
14	07.05	Immunobiological drugs for prophylaxis and therapy of infectious diseases. Vaccines. Immune serums and immunoglobulins. Concept about immunobiotechnology.	3, PW	2	3
15	14.05	Eubiotics. The basic principles of microbial biologics. Modern eubiotics	3, PW	2	3
16	21.05	Allergy. The concept of allergy.	3, PW	2	3
17	28.05	Control of module 2.	3, PW	4	9
Total M 2:				18	30
18	04.06	Final module control 1	3, PW	24	40
		Increase rating from module			
TOTAL FOR STUDY OF MODULE					

Head of the Division of microbiology,
virology and immunology, Professor

N.I. Filimonova



**PLAN
OF MICROBIOLOGY'S LECTURES CLASSES
FOR FOREIGN DEPARTMENT'S STUDENTS
226 "Pharmacy" 2 course
(spring semester 2019-2020 academic year)**

№	Date	Topic	Volume in hours	Lecturer
Module 1: "General microbiology"				
	03.09	Morphology and Physiology of bacteria. Chemical composition of bacterial cell. Nutrition and growth of bacteria. Methods of isolation and cultivation of aerobic and anaerobic bacteria. Enzymes of microbes. Respiration.	1	assistant prof. Dotsenko Roman Valeryevich
2	17.09	Morphology and biology of viruses. Study about infection	1	
3	01.10	Study about infection Epidemiology	1	
4	15.10	Antimicrobial chemotherapy. Chemotherapeutic drugs. Antibiotics. Side effects of antimicrobial medicines.	1	
5	29.10	The fundamentals of immunology. Innate (non-specific) and specific immunity. Immune system.	1	
		Immunobiological drugs for prophylaxis and therapy of infectious diseases. Concept about immunobiotechnology. Vaccines.	2	
		Immunobiological drugs for therapy of infectious diseases. Immune serum.	1	
TOTAL:			8	

Note: The lecture takes place on Monday at 10.25 in the room No. 2

Head of the Division of microbiology,
virology and immunology, Professor

N.I. Filimonova