

Study program: PHARMACY			
Type and level of studies: Integrated academic studies, Level 1/2			
Course unit: PHARMACEUTICAL MICROBIOLOGY			
Teacher in charge: Professor Dejan Baskić, MD, DSc, MSc			
Language instruction: ENGLISH			
ECTS credits: 5			
Semester: Winter Semester			
Prerequisite: Signed up for the third block of the study program of Pharmacy			
Course objective Understanding the basic characteristics of pathogens, modes of transmission and mechanisms of tissue damage in bacterial, parasitic, fungal and viral infections important in pharmacy. Introducing students to the treatment and prevention of infectious diseases.			
Course outcome Upon completion of the course Pharmaceutical Microbiology, students are expected to acquire basic knowledge: <ul style="list-style-type: none"> Bacterial cell biology, principles of sterilization and disinfection, mechanisms of antibiotic action and mechanisms of bacterial resistance to antibiotics; main characteristics of the pathogens, mode of transmission and mechanisms of tissue damage in bacterial infections; Structure and classification of viruses, their replication and types of viral infections; main characteristics of the pathogen, mode of transmission and mechanisms of tissue damage in viral infections Basic characteristics of protozoa, helminths and fungi, mode of transmission and mechanisms by which they induce tissue damage; Medically the most important pathogens and diseases they cause; At the end of the course Pharmaceutical Microbiology, students are expected to master the following skills: <ul style="list-style-type: none"> Independently perform analyzes and synthesis of relevant data, identify and solve problems, make decisions and apply the acquired knowledge in practice team work. 			
Course content: Theoretical and practical classes MODULE 1 - Basic characteristics of the pathogens, prevention, diagnosis, and treatment of infectious diseases teaching unit 1: <i>Basic characteristics of bacterial cells</i> teaching unit 2: <i>Basic characteristics of viruses, protoses, helminths and fungus</i> teaching unit 3: <i>Infection, pathogenicity and virulence. Pathogenesis of infectious diseases</i> teaching unit 4: <i>Prevention and diagnosis of infectious diseases</i> teaching unit 5: <i>Therapy of infectious diseases</i> MODULE 2 - Bacteriology teaching unit 6: <i>Bacteria causing pyogenic infection. Gram positive and gram negative cocci and coccobacilli</i> teaching unit 7: <i>Bacteria causing diareal syndromes. Enterobacteria and other gram negative bacilli</i> teaching unit 8: <i>Bacteria causing tuberculosis, lephra and diphtheria. Anaerobic and sporogenic bacteria.</i> teaching unit 9: <i>Bacteria causing zoonosis and sexually transmitted diseases. Spiral and intracellular bacteria</i> MODULE 3 - Virology teaching unit 10: <i>Viruses causing diareal syndrome and respiratory tract infections. Picornaviridae, reoviridae, orthomyxoviridae, paramyxoviridae and others</i> teaching unit 11: <i>Viruses causing rash fevers. Arbovirus infections and viral zoonosis</i> teaching unit 12: <i>Herpesviridae, papovaviridae, parvoviridae, adenoviridae</i> teaching unit 13: <i>Hepatitis viruses. Retroviruses and prions</i> MODULE 4 - Parasitology and mycology teaching unit 14: <i>Medically important parasites: Protozoa. Nematodes</i> teaching unit 15: <i>Medically important parasites and fungus: Cestodes and Trematodes. Fungus</i>			
<ul style="list-style-type: none"> Literature Бранислава Савић, Сања Митровић, Тања Јовановић. Медицинска микробиологија. Медицински факултет Београд, 2019 			
Number of hours of active teaching: 60	Theoretical teaching: 30		Practical teaching: 30
Teaching methods: Lectures and small group work (PBL)			
Knowledge assessment (maximum number of points 100)			
Prerequisites	points	Final exam	points
Activity during classes	60	Final tests by modules	40
		Practical exam	
		Oral exam	