

DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY / Faculty of Medicine, University of Banja Luka

School year	Subject	Subject code	Study Program	Cycle Studies	Year of Study	Semester	Number of students	Number of exercise groups
2024/2025.	Microbiology and Immunology		Medicine	Integrated study	Second year	III + IV (3+2)	63	3

LECTURE PLAN AND SCHEDULE

Week	Lesson	Subject	Day	Date	Time	Place	Hours	Lecturer
I	L1	Morphology and biology of protozoa and helminths. Epidemiological and ecological characteristics of parasitic infections. Antiparasitic agents	Tuesday			Amphitheater of the FPS	3	Prof. Miroslav Petković, M.D.
II	L2	Blood-tissue protozoa from the genera <i>Trypanosoma</i> , <i>Leishmania</i> , <i>Toxoplasma</i> and <i>Plasmodium</i>	Tuesday			Amphitheater of the FPS	3	Prof. Aleksandra Šmitran, M.D.
III	L3	Free-living amoebas and <i>Entamoeba histolytica</i> , microsporidia, intestinal coccidia, <i>Blastocystis hominis</i> . Flagellates of the intestinal and urogenital tract ( <i>Giardia</i> and <i>Trichomonas</i> )	Tuesday			Amphitheater of the FPS	3	Prof. Maja Travar, M.D.
IV	L4	Nematodes ( <i>Ascaris</i> , <i>Trichuris</i> , <i>Enterobius</i> , <i>Strongyloides</i> , <i>Trichinella</i> , <i>Toxocara</i> )	Tuesday			Amphitheater of the FPS	3	Prof. Miroslav Petković, M.D.
V	L5	Cestodes and trematodes ( <i>Taenia</i> , <i>Diphyllobothrium</i> , <i>Echinococcus</i> , <i>Fasciola</i> )	Tuesday			Amphitheater of the FPS	3	Prof. Aleksandra Šmitran, M.D.
VI	L6	Helminth infections of tropical regions ( <i>Filariae</i> , <i>Schistosoma</i> and other trematodes)	Tuesday			Amphitheater of the FPS	3	Prof. Maja Travar, M.D.
VII	L7	Morphology and biology of fungi. Antimycotics. Fungi, frequent causes of primarily infections of the skin and its adnexa: dermatophytes ( <i>Trichophyton</i> , <i>Microsporum</i> , <i>Epidermophyton</i> ) and fungi of the genus <i>Malassezia</i>	Tuesday			Amphitheater of the FPS	3	Prof. Miroslav Petković, M.D.
VIII	L8	Fungi of unclear taxonomy ( <i>Pneumocystis</i> ). Molds ( <i>Aspergillus</i> , <i>Penicillium</i> , <i>Fusarium</i> ). Yeasts: <i>Candida</i> and <i>Cryptococcus</i> . Biphasic fungi, zygomycetes. Mycoallergoses and mycotoxicosis	Tuesday			Amphitheater of the FPS	3	Prof. Aleksandra Šmitran, M.D.
IX	L9	Structure of the virus (viral genome, capsid and outer envelope). Taxonomic criteria for the classification of viruses. Virus replication. Immune response to viruses. Antiviral drugs. Antiviral vaccines	Tuesday			Amphitheater of the FPS	3	Prof. Maja Travar, M.D.
X	L10	Virus-cell relationship. Types of viral infections (lytic infections, persistent infections: latent, chronic and slow viral infections). Pathogenesis of viral infection. Picornaviridae (poliovirus, Coxsackievirus groups A and B, Echoviruses and Rhinoviruses)	Tuesday			Amphitheater of the FPS	3	Prof. Miroslav Petković, M.D.
XI	L11	<i>Orthomyxoviridae</i> (influenza virus). <i>Paramyxoviridae</i> (parainfluenza virus, mumps virus, measles virus, respiratory syncytial virus)	Tuesday			Amphitheater of the FPS	3	Prof. Aleksandra Šmitran, M.D.
XII	L12	Viruses causing infections of the gastrointestinal tract ( <i>Reoviridae</i> , <i>Coronaviridae</i> , <i>Adenoviridae</i> , <i>Caliciviridae</i> ). Rabies virus	Tuesday			Amphitheater of the FPS	3	Prof. Maja Travar, M.D.
XIII	L13	DNA viruses: Parvoviridae (parvovirus B19), <i>Adenoviridae</i> , <i>Poxviridae</i> (Variola virus, Vaccinia virus, <i>Mollusum contagiosum</i> virus); <i>Papillomaviridae</i> (human papillomaviruses), <i>Polyomaviridae</i> (JC and BK virus)	Tuesday			Amphitheater of the FPS	3	Prof. Miroslav Petković, M.D.
XIV	L14	<i>Herpesviridae</i> (Herpes simplex virus types 1 and 2, Varicella-Zoster virus, cytomegalovirus, Epstein-Barr virus, Human Herpesvirus-6, 7 and 8)	Tuesday			Amphitheater of the FPS	3	Prof. Aleksandra Šmitran, M.D.
XV	L15	<i>Retroviridae</i> (human T-lymphotropic viruses 1 and 2). Human Immunodeficiency Virus (HIV 1 and 2). ARBO viruses. Prions	Tuesday			Amphitheater of the FPS	3	Prof. Maja Travar, M.D.

\*FPS: Faculty of Political Science

### EXERCISES PLAN AND SCHEDULE

Week	Exercise	Subject	Day	Date	Time	Place	Hours	Lecturer
I	E1	Practical	Diagnosics of intestinal parasitosis. Protozoa of the digestive and urogenital tract: <i>Entamoeba histolytica</i> , <i>Giardia lamblia</i> , <i>Balantidium coli</i> , <i>Trichomonas vaginalis</i> .			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
II	E2	Practical	Diagnosics of parasitic infections of blood and tissues. Blood and tissue protozoa: <i>Trypanosoma</i> , <i>Leishmania</i> , <i>Toxoplasma gondii</i> .			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
III	E3	Practical	Diagnosics of malaria. Preparation of thick drop and peripheral smear and Giemsa staining.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
IV	E4	Practical	Nematodes. Preparation from stool sample and permanent microscopic slide.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
V	E5	Practical	Cestodes and trematodes. Preparation from stool sample and microscopic slide.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
VI	E6	Practical	Arthropods. Permanent preparations.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
VII	E7	Practical	Diagnosis of fungal infections of the skin and its adnexa, mucous membrane, eye and ear. Methods of identification of fungi.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
VIII	E8	Practical	Diagnosics of invasive fungal infections (candidiasis, aspergillosis). Testing the sensitivity of fungi to antimycotics.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
IX	E9	Practical	Basic principles of virological diagnostics (direct and indirect diagnostics). Receiving, sending, processing and storing materials for virological tests.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
X	E10	Practical	Virus isolation techniques in living cell systems (cell cultures, embryonated eggs, experimental animals).			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
XI	E11	Practical	Virus recognition techniques: electron microscopy, detection of viral antigens, detection of viral genome (molecular diagnostics of viral infections).			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
XII	E12	Practical	Diagnosis of viral hepatitis			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
XIII	E13	Practical	Serological diagnosis of viral infections: types of serological reactions.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.
XIV	E14	Practical	Serological reactions - interpretation of serological results, problems of serological diagnostics. Reliability of serological diagnostics.			ERD	1	Ivana Todorović, M. D., Ljiljana Božić, D.M.D.

ERD\* - Exercise Room of the Department

**HEAD OF THE DEPARTMENT:**

**Prof. Miroslav Petković. M.D.**