SUBJECT: MEDICAL MICROBIOLOGY – SUMMER (IV) SEMESTER (2nd Academic Year 2024-2025)

X weeks (30th June – 5th September 2025)

Group I - on the 3rd floor; Group II - on the 2nd floor of the Institute of Microbiology and Immunology

WEEK	Date	Time	Topic – lab classes	Professor/Assistant	Topic - prerecorded seminars	Topic - prerecorded lectures
1	4.7.2025.	09:00-11:15	(1) Serologic tests in diagnosis of bacterial infections.	Prof Nataša Vučković Opavski/Prof Vera Mijač	(3) Properties and medical importance of spirochetes (Treponema, Borrelia, Leptospira)	(2) Introduction to Medical Virology and general properties of viruses. Virion structures (genome, capsid, viral envelope). Criteria for viral classification. Taxonomy of viruses.
			(2) Laboratory diagnosis of infections caused by Chlamydia, Mycoplasma & Ureaplasma			
2	11.7.2025.	09:00-10:30	(2) The principles of laboratory diagnosis of viral infections. Collection of specimens	Asist. Prof Danijela Miljanovic (group 1) Teaching assistant Marko Jankovic (Group 2)	(1) Microorganisms and their products in food, water, and environment. Food- and waterborne infections (including zoonoses).	(2) Viral replication (recognition and attachment to the target cell, penetration, uncoating, transcription, translation, replication of the genome, viral protein synthesis, assembly, release).
					(2) Viral genetics. Mutations. Recombinations.	(2) Virus-host interaction. Cytolytic infection. The phenomenon of virus persistence. Various types of persistent infection (chronic, latent, „slow“ viral infections). Pathogenesis of viral infection.
3	18.7.2025.	09:00-11:15	(3) Virus isolation in the living system of cells (embryonated eggs, cell cultures, experimental animals). Practical Identification of viruses based on the morphology of viruses, viral antigens and viral nucleic acid.	Asist. Prof Danijela Miljanovic (group 1) Teaching assistant Marko Jankovic (group 2)	(1) Viral interference, interferons and antiviral mechanisms of interferons	(2) Picornaviridae (Polioviruses, Coxsackie A and B viruses, Echoviruses, Rhinoviruses). Respiratory viruses: Orthomyxoviridae (Influenza virus), Paramyxoviridae (Parainfluenza viruses), Pneumoviridae (Respiratory Syncytial Virus), Coronaviridae (SARS-CoV, MERS-CoV, SARS/CoV2).
4	25.7.2025.	09:00-10:30	(2) Serological diagnosis of viral infections: types of serological reactions & interpretation of serological test results and problems of serodiagnosis	Prof. Ivana Lazarevic (group 1) Teaching assistant Marko Jankovic (group 2)	(1). Oncogenic viruses. Mechanism of DNA and RNA oncogenesis	(2) Viral rash fever diseases: Matonaviridae (Rubella virus). Paramyxoviridae (Morbilli virus, Mumps virus), Parvoviridae (Parvo B19 virus). Poxviridae (Variola virus,

						Vaccinia virus, Molluscum Contagiosum virus). Reoviridae and other GIT viruses (Caliciviridae, „F“ types Adenoviruses, Coronaviridae).
						(2). Herpesviridae (Herpes simplex virus type 1 & 2, Varicella-Zoster virus, Cytomegalovirus, Epstein-Barr virus, HHV-6, 7, 8).
5	**1.8.2025.**	**09:00-10:30**	(2) Laboratory diagnosis of herpesviral infections.	Asist. Prof Danijela Miljanovic (group 1) Teaching assistant Marko Jankovic (group 2)	(1) Basic principles of antiviral therapy	(2) Primary hepatotropic viruses (HAV, HBV, HCV, HDV, HEV, HGV).
		10:45-12:15	(2) Laboratory diagnoses of viral hepatitis.	Prof. Ivana Lazarević (group 1) Prof. Ana Banko (group 2)		
6	**8.8.2025.**	**09:00-10:30**	(2) Laboratory diagnoses of HIV/AIDS	Prof. dr Aleksandra Knezevic (group 1) Prof. Maja Stanojević (group 2)	(1) Viral vaccines	(2) Retroviridae (HIV/AIDS, HTLV 1, 2) Papillomaviridae (HPV), Polyomaviridae (JC & BK virus), Adenoviridae
					(1) Viral zooneses (Rhabdoviridae, Arenaviridae, Filoviridae); Arboviruses (Togaviridae, Flaviviridae, Bunyavirales)	Lecture (2) Introduction in Medical Parasitology and Parasitic Diseases.
7	**15.8.2025.**	**09:00-11:15**	(3) Principles of laboratory diagnosis of intestinal parasitosis. Intestinal protozoa: Entamoeba histolytica, Giardia lamblia, Cryptosporidium spp., Microspora (microsporidia). Urogenital protozoa: Trichomonas vaginalis	Assoc Prof Ivana Čolović Čalovski (group 1) Asst Prof Eleonora Dubljanin (group 2)	(3) Principles of laboratory diagnosis of blood and tissue-dwelling protozoa. Blood and tissue protozoa: Plasmodium (malaria), Leishmania, Toxoplasma gondii. Free-living, amphizoic, and opportunistic amebas: Acanthamoeba & Naegleria.	(2) Medical Entomology: ectoparasites & vectors of infectious diseases.
						(2) Other intestinal protozoa: Blastocystis hominis, Cystoisospora belli, Cyclospora cayetanensis, Sarcocystis, Balantidium coli. Blood and tissue-dweling protozoa: Trypanosoma, Babesia

8	**22.8.2025.**	**09:00-11:15**	(3) Intestinal helminths: Enterobius vermicularis, Ascaris lumbricoides, Trichuris trichiura, Strongyloides stercoralis, Ancylostoma duodenale, Taenia solium, Taenia saginata, Hymenolepis nana, Diphyllobothrium latum.	Asst Prof Eleonora Dubljanin (group 1) Asst Stefan Mijatović (group 2)	(3) Tissue-dwelling helminths: Trichinella spiralis, Toxocara canis, Cysticercus (T. solium), Echinococcus (E. granulosus, E. multilocularis). Laboratory diagnosis of infections/infestations caused by ectoparasites: scabies, demodicosis, pediculosis, myiasis, ticks infesting humans.	(1) Tropical nematodes (roundworms)/filariae: Wuchereria bancrofti, Loa loa, Onchocerca volvulus. Dracunculus medinensis.
						(1) Trematodes (flukes): Schistosoma, Fasciola hepatica, Clonorchis sinensis, Paragonimus westermani, Fasciolopsis buski.
9	**29.8.2025.**	**09:00-11:15**	(3) Principles of laboratory diagnosis of fungal infections. Agents of superficial mycoses (skin and mucous membranes infections, onychomycosis, otomycosis, keratomycosis): Malassezia, dermatophytes (Microsporum, Trichophyton, Epidermophyton), Candida, Aspergillus.	Prof Valentina Arsić Arsenijević (group 1) Asst Stefan Mijatović (group 2)		(2) Introduction to Medical Mycology. Morphology and biology of fungi.
						(2) Dimorphic fungi. Pneumocystis jirovecii. Mycoallegoses and mycotoxicoses.
10	**5.9.2025.**	**09:00-11:15**	(3) Agents and laboratory diagnosis of invasive mycoses caused by yeasts (*Candida*, *Cryptococcus*) & molds (*Aspergillus*, *Fusarium*, *Mucorales*, *Penicillium*).	Prof Valentina Arsić Arsenijević (group 1) Asst Stefan Mijatović (group 2)		(2) Antiparasitic agents. Antifungal agents.

Important notes

- Students enrolled in the Microbiology course for the 2024/2025 academic year will be awarded full points for both class activity and the first colloquium.
- A student may miss one practical topic per semester without needing to make it up.
- Each student may attend one make-up session per course per semester without any fee.
- A student who misses more than one-third of the practical classes, regardless of the reason, will not be able to have the semester (or academic year) recognized.
- Make-up practical classes will be organized at the end of the semester. Detailed information will be announced in due time.

Belgrade, 27th June 2025