

## University of Niš Faculty of Medicine

Study program: Integrated academic studies of medicine

Course: Microbiology

Semester: III, IV

Study year: II

### Theoretical lectures in the autumn semester 2021/22

Week	Date	Teaching unit	lecturer	No of classes
1.	02.10.2020.	Introduction. Development of medical microbiology. Morphology and structure of bacteria.	Prof. Dr. Branislava Kocić	2
2.	9.10.2020	Bacterial growth and reproduction. Bacterial metabolism.	Prof. Dr. Branislava Kocić	2
3.	16.10.2020.	Bacterial genetics.	Prof. Dr. Predrag Stojanović	2
4.	23.10.2020.	Physical and chemical methods of microbial control. Antimicrobial agents	Prof. Dr. Biljana Miljković-Selimović	2
5.	30.10.2020.	The normal bacterial flora of humans. Infection, pathogenicity and bacterial virulence.	Prof. Dr. Marina Dinić	2
6.	06.11.2020.	<i>Staphylococcus spp.</i> , <i>Streptococcus spp.</i> ( <i>S.pyogenes</i> , <i>S.agalactiae</i> , <i>S.pneumoniae</i> )	Prof. Dr. Marina Dinić	2
7.	13.11.2020	<i>Enterococcus spp.</i> , <i>Neisseria meningitidis</i> , <i>Neisseria gonorrhoeae</i> , <i>Haemophilus spp.</i>	Prof. Dr. Marina Dinić	2
8.	20.11.2020	<i>Bordetella pertussis</i> , <i>Brucella spp.</i> , <i>Francisella tularensis</i> , <i>Legionella pneumophila pneumophila</i>	Prof. Dr. Biljana Miljković-Selimović	2
9.	27.11.2020	<i>Salmonella spp.</i> , <i>Shigella spp.</i>	Prof. Dr. Biljana Miljković-Selimović	2
10.	04.12.2020.	<i>E. coli</i> . Conditionally pathogenic gut bacteria /Opportunistic pathogens in gut. <i>Vibrio cholerae</i> , <i>Campylobacter spp.</i> , <i>Helicobacter pylori</i>	Prof. Dr. Biljana Miljković-Selimović	2
11.	11.12.2020	<i>Yersinia spp.</i> <i>Pseudomonas aeruginosa</i> , <i>Corynebacterium diphtheriae</i> , <i>Listeria monocytogenes</i>	Prof. Dr. Branislava Kocić	2
12.	18.12.2020	<i>Bacillus anthracis</i> , <i>Clostridium spp.</i>	Prof. Dr. Marina Dinić	2
13.	25.12.2020	<i>M. tuberculosis</i> , <i>M. leprae</i> , <i>Treponema pallidum</i> ,	Prof. Dr. Branislava Kocić	2
14.	01.01.2021	<i>Borrelia spp.</i> , <i>Borrelia spp.</i> , <i>Leptospira spp.</i>	Prof. Dr. Predrag Stojanović	2
15.	15.1.2021	<i>Mycoplasma</i> , <i>Rickettsiales</i>	Prof. Dr. Predrag Stojanović	2

**Practical classes in the autumn semester 2021/22**

Week	Date	Teaching unit	Lecturer	No of classes
1.	28.09.-2.10. 2020	Introduction to the safety rules in microbiological laboratory. Sampling methods for microbiological analysis. Basic principles of isolation and identification of bacteria. Microscopic methods for studying microorganisms. Microscopy - observing bacterial motility.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
2.	5-9.10. 2020	Bacterial staining methods. Staining techniques. Application of stains in bacteriology.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
3.	12-16.10. 2020	Culture media in microbiology (purpose, types and classification). Cultural and biochemical identification of bacteria.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
4.	19.-23. 10. 2020.	In vitro susceptibility testing of bacteria to antimicrobial agents (diffusion and dilution methods). Cultivation in animal models.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
5.	26.10.- 30.10. 2020	Immunodiagnostic methods and their application in microbiological diagnosis.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica	2X2

			Đorđević Asist. Dr. Marina Randelović Asist.dr Marina Randelović	
6.	2.-6.11. 2020	Urine culture and blood culture.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
7.	9.-13. 11.2020	Diagnosis of pyogenic bacterial infections. Microbiological diagnosis of infections caused by bacteria of the genus <i>Staphylococcus</i> and the genus <i>Streptococcus</i> .	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
8.	16-20. 11.2020	Throat swab culture. Cerebrospinal fluid analysis: culture and stain. Microbiological diagnosis of infections caused by <i>N. meningitis</i> , <i>N. gonorrhoeae</i> , <i>H. Influenzae</i> .	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
9.	23.-27.11. 2020	Fecal culture. I. ( <i>Salmonella spp.</i> , <i>Shigella spp.</i> )	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
10.	30.11.-4. 12.2020	Fecal culture II ( <i>E. coli</i> , <i>Yersinia enterocolitica</i> , <i>Vibrio cholerae</i> , <i>Campylobacter spp.</i> ). Microbiological diagnosis of infections caused by <i>Helicobacter pylori</i> .	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2

			Asist. Dr. Marina Randelović	
11.	7.-11. 12.2020	Microbiological diagnosis of diphtheria and anthrax.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
12.	14.-18. 12.2020	Principles of isolation of anaerobic bacteria. Microbiological diagnosis of infections caused by clostridia.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
13.	21.-25. 12.2020	Microbiological diagnosis of tuberculosis.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
14.	28.12.-31.12. 2020	Microbiological diagnosis of influenza and infection caused by bacteria of the genus <i>Borrelia</i> and of the genus <i>Leptospira</i>	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2
15.	11.-15. 1.2021	Microbiological diagnosis of infection caused by mycoplasmas and chlamydia.	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević Asist. Dr. Marina Randelović	2X2

**UNIVERSITY OF NIŠ FACULTY OF MEDICINE**

<b>Study program:</b> Integrated academic studies of medicine				
<b>Course:</b> Microbiology				
<b>Semester:</b> IV				
<b>Study year:</b> II				
<b>THEORY TEACHING IN THE SPRING SEMESTER 2021/22</b>				
Week	Date	Teaching unit	Lecturer	No. of classes
16.	22.02.2021.	Introduction to medical parasitology. Morphology, biology and classification of medically relevant Protozoa. Protozoas of the digestive and urogenital tract: <i>Entamoebahistolytica</i> , amebas saprophytic to the digestive tract, <i>Balantidium coli</i> , <i>Giardia lamblia</i> , <i>Trichomonas vaginalis</i>	Prof. Dr. Nataša Miladinović Tasić	2
17.	1.03.2021.	Protozoas of the blood and tissues: <i>Leishmania spp.</i> , <i>Trypanosoma spp.</i> , <i>Plasmodium spp.</i> , <i>Toxoplasma gondii</i> , <i>Cryptosporidium spp.</i>	Prof. Dr. Nataša Miladinović Tasić	2
18.	8.03.2021.	Tissue amebas: <i>Naegleria fowleri</i> , <i>Acanthamoeba spp.</i> Helminthes: morphology, biology, classification. Medically relevant helminthes. Helminthes of the digestive tract: <i>Cestode</i> → <i>Taenia spp.</i> , <i>Diphyllobotrium latum</i> , <i>Hymenolepis nana</i>	Prof. Dr. Nataša Miladinović Tasić	2
19.	15.03.2021.	<i>Nematodes</i> → <i>Enterobius vermicularis</i> , <i>Trichuris trichiura</i> . <i>Ascaris lumbricoides</i> , <i>Ancylostoma duodenale</i> , <i>Strongyloides stercoralis</i> Tissue helminthes: <i>Cysticercus cellulosae</i>	Prof. Dr. Suzana Otašević	2
20.	22.03.2021.	<i>Echinococcus spp.</i> , <i>Toxocara spp.</i> , <i>Trichinella spiralis</i> Introduction to medical mycology. General characteristics of pathogenic and conditionally pathogenic fungi, classification of medically relevant fungi and classification of mycoses	Prof. Dr. Suzana Otašević	2
21.	29.03.2021.	Causes of superficial mycoses: <i>Malassezia furfur</i> , <i>Trichophyton spp.</i> , <i>Epidermophyton spp.</i> , <i>Microsporum spp.</i>	Prof. Dr. Suzana Otašević	2
22.	5.04.2021.	Causes of opportunistic fungal infections: <i>Candida spp.</i> , <i>Cryptococcus neoformans</i> ,	Prof. Dr. Suzana Otašević	2

		<i>Penicillium spp., Aspergillus spp.</i>		
23.	12.04.2021.	General characteristics of viruses Replication of viruses and anti-viral effect of interferon	Prof. Dr. Dobrila Stanković-Dorđević	2
24.	19.04.2021.	Virus-cell relationship	Prof. Dr. Dobrila Stanković-Dorđević	2
25.	26.04.2021.	<i>Picornaviridae, (Enterovirus, Rhinovirus) Togaviridae (Rubivirus), Flaviviridae (Flavivirus) Reoviridae (Rotavirus) Bunyaviridae (Hantavirus)</i>	Prof. Dr. Dobrila Stanković-Dorđević	2
26.	3.05.2021.	<i>Orthomyxoviridae (Orthomyxovirus, Influenza C virus), Paramyxoviridae (Paramyxovirus, Morbillivirus, Pneumovirus)</i>	Prof. Dr. Dobrila Stanković-Dorđević	2
27.	10.05.2021.	<i>Retroviridae (Oncovirinae, Lentivirinae - HIV)</i>	Prof. Dr. Dobrila Stanković-Dorđević	2
28.	17.05.2021.	<i>Rhabdoviridae (Lyssavirus, Vesiculovirus), Parvoviridae (Parvovirus), Papovaviridae (Polyomavirinae Papilloma-virine), Adenoviridae (Mastadenovirus), Poxviridae Orthopoxvirus)</i>	Prof. Dr. Dobrila Stanković-Dorđević	2
29.	24.05.2021.	<i>Herpesviridae (Herpes simplex virus, Varicellavirus, Cytomegalovirus, Epstein-Barr virus)</i>	Prof. Dr. Dobrila Stanković-Dorđević	2
30.	31.05.2021.	Primarily hepatotropic viruses ( <i>HAV, HBV, HCV, HDV, HEV, HGV</i> )	Prof. Dr. Dobrila Stanković-Dorđević	2

<b>PRACTICAL TEACHING (PRACTICE) IN THE SPRING SEMESTER 2021/22</b>				
Week	Date	Teaching unit	Lecturer	No. of classes
16.	22-26.02.2021	Basic principles of diagnosis of the protozoa of the digestive and urogenital tract Laboratory diagnosis of malaria, leishmaniasis, tripanosomosis, and toxoplasmosis	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
17.	1.-5.03.2021.	Microscopy of preparations Diagnosis of helminthic diseases. Diagnostic and differential diagnostic methods to detect helminths in the digestive tract	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
18.	8.-12.03.2021	Diagnosis of parasitoses caused by blood and tissue helminths	Prof. Dr. Biljana Miljković-Selimović,	2X2

		Microscopy of preparations	Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	
19.	15.-19. 03.2021	Microbiological diagnosis of superficial mycoses. Significance of a mycology lab in the diagnosis of opportunistic mycoses Microscopy of preparations	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
20.	22.-26. 03.2021.	Sampling and sending of material for virusological diagnosis. Processing of material in a virology lab.  Techniques of isolation of viruses in living cell systems (cell cultures, embryonic eggs, experimental animals)	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
21.	29.3.- 2. 04.2021.	Methods of detection and identification of isolated viruses (CPE, plaque technique, chemadsorption, neutralisation test).  Methods of direct demonstration of viruses in patient material (electronic microscopy and detection of viral antigens).	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
22.	5. - 9. 04.2021	Methods of molecular biology in viral diagnosis (hybridisation and PCR)  Serological diagnosis of viral infections	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
23.	12.-16. 04.2021.	Interpretation of the results of serological reactions and problems in serological diagnosis	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
24.	19.-23. 04.2021.	Mechanisms of resistance and therapeutical problems of the	Prof. Dr. Biljana Miljković-Selimović,	2X2

		infections with multiresistant bacteria in a hospital environment	Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	
25.	26.-30. 04.2021.	Diagnostic dilemmas in bacterial infections with atypical clinical picture	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
26.	3. -7. 05.2021.	Immunopathogenesis of viral hepatitis and mechanisms of persistent infections caused by primarily hepatotropic viruses	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
27.	10.- 14. 05.2021	HIV and AIDS	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
28.	17.-21. 05.2021	Bacterial infections in immunodeficient patients Hospital infections	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
29.	24.-28.05. 2021.	Viral vaccines  Prions and prion diseases. New and emerging viral infections	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša Miladinović-Tasić Asist. Dr. Vukica Đorđević	2X2
30.	31.05. 4.6. 2021.	Infections with trematodes – rare but possible human parasitoses Tropical parasitoses Tropical mycoses	Prof. Dr. Biljana Miljković-Selimović, Prof. Dr. Marina Dinić, Prof. Dr. Nataša	2X2

			Miladinović-Tasić Asist. Dr. Vukica Đorđević	
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