


<b>University of Niš</b> <b>Faculty of Medicine</b>	<b>Study program:</b> <b>INTEGRATED ACADEMIC STUDIES OF MEDICINE</b> <i>ACCREDITATION 2018</i>		
<b>Course: Microbiology</b>			
<b>Course head:</b> Prof. dr Nataša Miladinović Tasić			
<b>Course status:</b>	Required		
<b>Semester:</b> III, IV	<b>Study year:</b> II		
<b>ECTS:</b> 10	<b>Course code:</b> M-II-13		
<b>Course purpose:</b>			
<p>The course Microbiology should provide students with the knowledge of:</p> <ul style="list-style-type: none"> <li>▪ Causes of infectious diseases;</li> <li>▪ Biological characteristics of infectious agents (morphology, structure, antigen structure, pathogenic and properties of virulence, ability of <i>in vitro</i> reproduction, resistance in the environment, sensitivity to physical and chemical agents);</li> <li>▪ Pathogenetic processes at the level of interaction of an infectious agent and its host;</li> <li>▪ Clinical manifestations of infections caused by various types of bacteria, viruses, parasites, and fungi;</li> <li>▪ Host immune response to various infectious agents;</li> <li>▪ Microbiologic diagnostic procedures.</li> </ul>			
<b>Course outcome:</b> (knowledge, skills, attitudes)			
<p>Knowledge acquired during the course will enable future doctors of medicine to:</p> <ul style="list-style-type: none"> <li>▪ Recognise the possible cause of an infectious disease based on clinical evidence;</li> <li>▪ Make decision(s) regarding the type of patient material for microbiological diagnosis and to refer the patient for the most appropriate diagnostic procedure;</li> <li>▪ Properly interpret microbiology findings;</li> <li>▪ Implement the principles of rational use of antibiotics and chemotherapeutics in the therapy of infectious diseases;</li> <li>▪ Use the measures of control and prevention of infectious diseases.</li> </ul>			
<b>Nr. of classes of active teaching: 120</b>			
<b>Lectures: 60</b>	<b>Practice: 52</b>	<b>OFT: 8</b>	
<b>Course content</b>			
<u>Theoretical classes</u>			
<p><b>General and special bacteriology.</b> Biological characteristics of a bacterial cell (morphology, structure, physiological processes, pathogenic properties and virulence, sensitivity to physical and chemical agents). Bacterial species relevant for human medicine (structure, interaction with human cells, tissues, and host immune response, microbiological diagnosis, specific therapy and prevention of the infection caused by a given bacterial species).</p>			
<p><b>General and special virology.</b> Biological characteristics of viruses (structure, replication, relationship with host cells, sensitivity to physical and chemical agents). DNA and RNA viruses relevant in human medicine (structure, interactions with host cells, tissues, and immune response, virological diagnosis, specific therapy and prophylaxis of viral infections).</p>			
<p><b>Parasitology.</b> Morphology, biology, and classification of protozoas and helminths.</p>			
<p><b>Mycology.</b> Morphology, biology, and classification of fungi. Atrhopodes relevant in human medicine.</p>			
<u>Practical classes</u>			
<p>Microbiological diagnostic methods: microscopy and staining of bacteria, parasites and fungi, isolation and identification of microorganisms, parasites and fungi, examination of sensitivity of microorganisms to antibiotics and chemotherapeutics, biologic assay, immunodiagnostic methods and methods of molecular biology (hybridisation, PCR). Principles, performance, and use of microbiological methods in the diagnosis of infectious diseases.</p>			
<b>3. OFT (drugi oblici nastave) - Seminars</b>			
1.	Bacterial infections in immunodeficient patients		
2.	Hospital infections		

3.	Viral vaccines
4.	Prions and prion diseases. New and emerging viral infections
5.	Infections with trematodes – rare but possible human parasitoses
6.	Tropical parasitoses
7.	Tropical mycoses
<b>Recommended literature:</b>	
<ol style="list-style-type: none"> <li>1. Stefan Riedel, Stephen Morse, Timothy Mietzner, Steve Miller: Jawetz Melnick &amp; Adelbergs Medical Microbiology, McGraw Hill 2019.</li> <li>2. Connie R. Mahon, Donald C. Lehman, George Manuselis: Textbook of Diagnostic Microbiology, 5e. Elsevier Science. 2016.</li> <li>3. Gary W. Procop, Elmer W. Koneman: Koneman's Color Atlas and Textbook of Diagnostic Microbiology, 2016. LWW Lippincott Williams and Wilkins. 2016.</li> </ol>	
<b>Teaching methods:</b>	
<ul style="list-style-type: none"> <li>▪ Interactive theoretical and practical teaching</li> <li>▪ Consultations</li> <li>▪ Seminar papers</li> </ul>	
<b>Required previously passed exams:</b>	
Molecular and human genetics	
<b>Grade (max. 100 points)</b>	
<b>Pre-exam obligations</b>	
<ul style="list-style-type: none"> <li>▪ Attendance and activity at lecture classes: 0 – 2 credits</li> <li>▪ Activity at practice classes: 0 – 5 credits</li> <li>▪ Seminar papers: 0 – 3 credits</li> <li>▪ Colloquium 1 and 2 (Test) 0 – 20 credits</li> <li>▪</li> </ul>	
<b>Final exam</b>	
<ul style="list-style-type: none"> <li>▪ Practical exam: 6 – 10 credits</li> <li>▪ Oral: 45 – 60 credits</li> </ul>	