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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Medicine |
| **GENERAL INFORMATION** |
| Study program  | **Integrated academic studies of medicine** |
| Study Module (if applicable) |  |
| Course title | Microbiology |
| Level of study |  x☐Bachelor x ☐ Master’s ☐ Doctoral |
| Type of course |  x ☐ Obligatory ☐ Elective |
| Semester  |  x ☐ Autumn x ☐Spring |
| Year of study  |  II |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Dean of the Faculty full professor Dobrila Stanković-DjordjevićFull professor Branislava KocićFull professor Suzana OtaševićAssociate professor Gordana RandjelovićAssociate professor Marina DinićAssociate professor Biljana Miljković-SelimovićAssistant professor Predrag StojanovićTeaching fellow Milena Bogdanović  |
| Teaching mode | x ☐Lectures x ☐Group tutorials x☐ Individual tutorialsx ☐Laboratory work ☐ Project work x☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The course Microbiology should provide students with the knowledge of: causes of infectious diseases and biological characteristics of infectious agents. The course provide the knowledge of pathogenic processes at the level of interaction between an infectious agent and a host, immune response of the host to various types of infectious agents and a host clinical manifestations. The course also provide the knowledge of microbiologic diagnostic procedures. The knowledge obtained during the course should enable a medical doctor to recognize the possible causes of infection, determine the appropriate sample for microbiological diagnosis and correctly interpret the findings with use of the principles of rational use of antimicrobial agents. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| General bacteriology: general characteristic of bacteria – morphology, growth of bacteria, genetic material of bacteria, virulence factors, inflammatory reaction, sterilization and disinfection, mechanism of action of antimicrobial agents and mechanisms of resistance. Classification of bacteria, Gram positive cocci (Staphylococcus spp., Streptococcus spp), Gram negative cocci (Neisseria spp.), Gram positive bacilli ( Corynebacterium spp., Mycobacterium spp., Bacillus spp. Clostridium spp. Listeria monocytogenes), Gram negative bacilli (Enterobacteriaceae, Bordetella pertussis, Brucella spp., Francisella tularensis, Legionella pneumophila, Vibrio spp., Campylobacter spp., Helicobacter pylori, Yersinia spp., Pseudomonas aeruginosa) intracellular bacteria (Chlamydia spp. Rickettsiales), spiral bacteria (Treponema pallidum, Leptospira spp., Borreilia spp.) Virology – general virology – viral classification, structure and stages of viral replication. Mechanism of viral pathogenesis. Immune response to viral infections, antiviral drugs and vaccine. Picornaviridae, Flaviviridae, Reoviridae, Bunyaviridae, Orthomyxoviridae, Paramyxoviridae, Retroviridae, Rhabdoviridae, Parvoviridae, Papovaviridae, Adenoviridae, Poxviridae, Herpesviridae, hepatitis viruses (HAV, HBC, HCV, HDV, HEV, HGV). The protozoa – general characteristics – life cycle, pathogenesis of diseases caused by medically important protozoa Entamoeba histolytica, Balantidium coli, Giardia lamblia, Trichomonas spp., Leishmania spp., Trypanosoma spp., Plasmodium spp., Toxoplasma gondii, Negleria flowleri, Acanthamoeba spp. Helmintes – general characteristics – life cycle, pathogenesis of diseases caused by medically important helmintes cestodes, nematodes, trematodes. The fungi – general characteristics, medically important yeasts, molds and dermatophytes. The pathogenesis of systemic and superficial mycoses. Trichophyton spp., Epidermophyton spp., Microsporum spp., Candida spp., Cryptococcus neoformans, Penicillium spp., Aspergillus spp. |
| **LANGUAGE OF INSTRUCTION** |
| x ☐Serbian (complete course) x ☐ English (complete course) ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)☐Serbian with English mentoring ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **0-7** | **Written examination** | **0-30**  |
| **Practical teaching** | **0-10** | **Oral examination** | **37- 50** |
| **Teaching colloquia** | **0-3** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |