

**Program of Study** : Dentistry  
**Course** : Microbiology 2 – Oral Microbiology  
**Abbreviation** : MIK/ZAA12  
**Schedule** : 15 hours of lectures  
                   30 hours of exercises  
**Course Distribution** : 3<sup>rd</sup> year, 5<sup>th</sup> semester  
**Number of Credits** : 5  
**Course Form** : Lectures, exercises

**Lectures :**

**Teachers :** prof. MUDr. Milan Kolář, Ph.D.  
                   doc. MUDr. Petr Hamal, Ph.D.  
                   Mgr. Patrik Mlynářčík, Ph.D.  
                   MUDr. Peter Imwensi

**Study :** Continuous

	<b>Date</b>	<b>Subject</b>	<b>No. of Less.</b>	<b>Teacher</b>
1	23.9.2022	<i>Salmonella</i> . Genus <i>Shigella</i> . Other enterobacteria.	1	doc. Hamal
2	23.9.2022	Gastrointestinal tract infections.	1	doc. Hamal
3	7.10.2022	Genus <i>Streptococcus</i> . Streptococcal infections.	1	prof. Kolář
4	7.10.2022	Genus <i>Staphylococcus</i> . Staphylococcal infections.	1	prof. Kolář
5	21.10.2022	Genus <i>Neisseria</i> . Clinical diseases caused by gonococci and meningococci. Genus <i>Haemophilus</i> .	1	Dr. Imwensi
6	21.10.2022	Genus <i>Treponema</i> . Syphilis. Genus <i>Borrelia</i> . Lyme borreliosis	1	Dr. Imwensi
7	4.11.2022	Anaerobic infections.	1	Mgr. Mlynářčík
8	4.11.2022	Genus <i>Clostridium</i> . Tetanus, botulism, gas gangrene.	1	Mgr. Mlynářčík
9	18.11.2022	Genus <i>Chlamydia</i> and <i>Chlamydophila</i> . Genus <i>Mycoplasma</i> .	1	prof. Kolář
10	18.11.2022	Genus <i>Mycobacterium</i> . Tuberculosis, leprosy	1	prof. Kolář
11	2.12.2022	General mycology.	1	doc. Hamal
12	2.12.2022	Genus <i>Candida</i> . Systemic mycoses.	1	doc. Hamal
13	16.12.2022	Characterization of viruses.		prof. Kolář
14	16.12.2022	Most frequent viral infections. Antiviral therapy.		prof. Kolář

15	30.12.2022	Christmas holidays.		
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### Exercises :

**Leading teacher :** doc. MUDr. Petr Hamal, PhD.

**Study :** Continuous

	Date	Subject	No. of Less.
1	23.9.2022	Revision of microscopic techniques, cultivation and serological tests.	2
2	30.9.2022	Identification of bacteria: biochemical tests, MALDI-TOF, genetic methods.	2
3	7.10.2022	Identification of gram-positive microorganisms: Laboratory diagnosis of streptococci, enterococci and staphylococci. General characteristics of bacterial colonies. Collection, transport and processing of specimens from upper and lower respiratory tract.	2
4	14.10.2022	Identification of gram-negative microorganisms: Laboratory diagnosis of enterobacteria, <i>Acinetobacter</i> , <i>Pseudomonas</i> and <i>Stenotrophomonas</i> species. General characteristics of bacterial colonies. Collection, transport and processing of specimens from urinary tract and stool.	2
5	21.10.2022	Laboratory diagnosis of <i>Neisseria</i> , <i>Bordetella</i> and <i>Haemophilus</i> species. General characteristic of bacterial colonies.	2
6	28.10.2022	State Holiday.	
7	4.11.2022	Identification of anaerobic bacteria: <i>Actinomyces</i> , <i>Peptococcus</i> , <i>Peptostreptococcus</i> , <i>Bacteroides</i> and <i>Clostridium</i> species. General characteristics of bacterial colonies.	2
8	11.11.2022	Laboratory diagnosis of mycobacterial infections.	2
9	18.11.2022	Differential microbiological diagnosis of genital tract infections and sexually transmitted diseases. Microbial vaginal pictures.	2
10	25.11.2022	Laboratory diagnosis of viral infections 1 <sup>st</sup> part: Principles of the complement fixation test and immunoenzymatic reactions.	2
11	2.12.2022	Laboratory diagnosis of viral infections 2 <sup>nd</sup> part: Serodiagnosis of influenza. Serodiagnosis of glandular fever.	2
12	9.12.2022	Mycology: Collection and transport of the specimens to the mycologic study. Microscopic examination and cultivation of fungi. Identification of moulds; macro- and microculture. Laboratory diagnosis of <i>Aspergillus</i> , <i>Penicillium</i> , <i>Mucor</i> and <i>Trichophyton</i> species. Identification of yeasts. Selective-differential agars for rapid diagnostic of medically important <i>Candida</i> species. Ascospores, chlamydospores, assimilation and fermentation test.	2
13	16.12.2022	Microbiological diagnosis of upper and lower respiratory tract infections. Microbiological diagnosis of bloodstream infections.	2
14	23.12.2022	Microbiological diagnosis of hospital-acquired infections.	2
15	6.1.2023	Microbiological diagnosis of community-acquired infections.	2

**Completed by :** Exam

**Requirements :** Presence in practical trainings, one absence tolerated at the most, it's possible substitute up to one third of practical trainings. Individual preparation for each practical training is obligatory.

Credit test.

**Basic literature :**

1. Medical Microbiology: with student consult access (Medical Microbiology) (Paperback 2005) by Patrick R. Murray et al. (available at [www.amazon.com](http://www.amazon.com))
2. Koukalová D. et al.: Microbiology I, UP v Olomouci, 2002
3. Kolář et al.: Microbiology II, UP v Olomouci, 2002

**Alternative literature :**

4. Medical Microbiology (Paperback 2004) by Cedric A. Mims (Editor), (available at [www.amazon.com](http://www.amazon.com))
5. Human Virology: A Text for Students of Medicine, Dentistry and Microbiology (Paperback 2000) by Leslie Collier et al. (available at [www.amazon.com](http://www.amazon.com))