

**Program of Study** : General Medicine  
**Course** : Microbiology 2  
**Abbreviation** : MIK/VAA12  
**Schedule** : 30 hours of lectures  
                   30 hours of exercises  
**Course Distribution** : 3<sup>rd</sup> year, 5<sup>th</sup> semester  
**Number of Credits** : 6  
**Course Form** : Lectures, exercises

**Lectures :**

**Teachers :** prof. MUDr. Milan Kolář, Ph.D.  
                   doc. MUDr. Petr Hamal, Ph.D.  
                   RNDr. Dominik Rejman, Ph.D.

**Study :** Continuous

	<b>Date</b>	<b>Subject</b>	<b>No. of Less.</b>	<b>Teacher</b>
1	16.9.2019	Genus <i>Streptococcus</i> . Streptococcal infections.	2	prof. Kolář
2	23.9.2019	Genus <i>Staphylococcus</i> . Staphylococcal infections.	2	prof. Kolář
3	30.9.2019	Genus <i>Salmonella</i> . Genus <i>Shigella</i> . Other enterobacteria. Genus <i>Vibrio</i> . Cholera. Gastrointestinal tract infections.	2	doc. Hamal
4	7.10.2019	Genus <i>Neisseria</i> . Clinical diseases caused by gonococci and meningococci.	2	prof. Kolář
5	14.10.2019	Genus <i>Clostridium</i> . Tetanus, botulism, gas gangrene.	2	prof. Kolář
6	21.10.2019	Genus <i>Mycobacterium</i> . Tuberculosis, leprosy.	2	Dr. Rejman
7	28.10.2019	State holiday.		
8	4.11.2019	Genus <i>Chlamydia</i> and <i>Chlamydophila</i> . Genus <i>Mycoplasma</i> . Atypical pneumonia.	2	prof. Kolář
9	11.11.2019	Genus <i>Treponema</i> . Syphilis. Genus <i>Borrelia</i> . Lyme borreliosis.	2	prof. Kolář
10	18.11.2019	Pathogenic protozoa.	2	Dr. Rejman
11	25.11.2019	Pathogenic worms.	2	doc. Hamal
12	2.12.2019	Genus <i>Candida</i> . Genus <i>Aspergillus</i> . Systemic mycoses.	2	doc. Hamal
13	9.12.2019	Skin mycoses. The dermatophytes. Genus <i>Malassezia</i> .	2	doc. Hamal

14	16.12.2019	Family <i>Retroviridae</i> . AIDS. Family <i>Orthomyxoviridae</i> . Influenza. Etiologic agents of viral hepatitis.	2	prof. Kolář
15	23.12.2019	Christmas holidays.		

### Exercises :

**Leading teacher :** prof. MUDr. Milan Kolář, Ph.D.

**Study :** Continuous

	Date	Subject	No. of Less.
1	19.-20.9.2019	Identification of gram-positive microorganisms – 1 <sup>st</sup> part: Laboratory diagnosis of streptococci and enterococci. General characteristics of bacterial colonies. Collection, transport and processing of specimens from upper respiratory tract.	2
2	26.-27.9.2019	Identification of gram-positive microorganisms – 2 <sup>nd</sup> part: Laboratory diagnosis of staphylococci and corynebacteria. General characteristic of bacterial colonies. Collection, transport and processing of specimens from lower respiratory tract.	2
3	3.-4.10.2019	Identification of gram-negative microorganisms – 1 <sup>st</sup> part: 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
4	10.-11.10.2019	Identification of gram-negative microorganisms – 2 <sup>nd</sup> part: Laboratory diagnosis of <i>Neisseria</i> , <i>Bordetella</i> and <i>Haemophilus</i> species. General characteristic of bacterial colonies. Collection transport and processing of specimens from blood and cerebrospinal fluid.	2
5	17.-18.10.2019	Differential microbiological diagnosis of genital tract infections and sexually transmitted diseases. Microbial vaginal pictures. Collection, transport and processing of specimens from genital tract.	2
6	24.-25.10.2019	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. Collection, transport and processing of pus.	2
7	31.10.-1.11.2019	Laboratory diagnosis of mycobacterial infections.	2
8	7.-8.11.2019	Parasitology: How to make diagnosis of parasitic infections. Faust-concentration method. Schüffner and Graham methods. Microscopy identification of parasitic	2

		eggs. Collection, transport and processing of specimens from parasitic infections.	
9	14.-15.11.2019	Laboratory diagnosis of viral infections. Principles of the complement fixation test and immunoenzymatic reaction.	2
10	21.-22.11.2019	Serodiagnosis of influenza. Serodiagnosis of glandular fever.	2
11	28.-29.11.2019	Mycology 1 <sup>st</sup> part: 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.	2
12	5.-6.12.2019	Mycology 2 <sup>nd</sup> part: Identification of yeasts. Selective-differential agars for rapid diagnostic of medically important <i>Candida</i> species. Ascospores, chlamydospores, assimilation and fermentation tests.	2
13	12.-13.12.2019	Microbiological diagnosis of upper and lower respiratory tract infections.	2
14	19.-20.12.2019	Microbiological diagnosis of urinary tract infections. Microbiological diagnosis of bloodstream infections.	2
15	2.-3.1.2020	Microbiological diagnosis of hospital-acquired infections. Microbiological diagnosis of community-acquired infections.	2

**Completed by :** Exam (three parts: practical exam, written multi-choice test, teoretical exam)

**Requirements :** Presence in practical trainings, one absence tolerated at the most, it's possible substitute up to one third of practical trainings.

**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))