



Approved by Dept. Council
№11/09.09.2026

PRACTICAL EXERCISES IN MEDICAL MICROBIOLOGY

English-speaking medical students 2nd TERM - 2026/2027

1. Microbiological diagnosis of staphylococcal and streptococcal infections. Microbiological examination of Pus.
2. Microbiological examination in diseases caused by *Streptococcus pneumoniae*. Microbiological diagnosis of Tuberculosis and Leprosy. Microbiological examination of sputum.
3. Microbiological diagnosis of Diphtheria and Pertussis. Microbiological examination of throat swabs.
4. Microbiological diagnosis of Gas gangrene and Tetanus. Microbiological examination of wound secretions.
5. Microbiological examination of CNS materials. Microbiological diagnosis and differential diagnosis of bacterial meningitis (*Neisseria meningitidis* and *Haemophilus influenzae*).
6. Microbiological diagnosis of particularly dangerous infections – Anthrax, Cholera and Plague.
7. **Seminar (Exercises №1 – 6, TEST №1)**
8. Microbiological examination of materials from the digestive system (feces). Microbiological diagnosis of bacterial dysentery, *E. coli* enteritis, Salmonellosis. Shigellosis. Food poisoning by *Staphylococcus aureus*, clostridia (*C. botulinum*, *C. perfringens*). Microbiological examination of gastric mucosa biopsy material (*Helicobacter pylori*).
9. Microbiological examination of urine. Microbiological diagnosis of pathogens causing urinary tract infections: opportunistic pathogens (*E. coli*, *Klebsiella*, *Proteus-Providencia-Morganella* group, *Pseudomonas spp.*) and obligatory pathogenic (streptococci, salmonella, *Leptospira spp.*, *Mycobacterium tuberculosis*).
10. Microbiological examination for sexually transmitted infections caused by *Neisseria gonorrhoeae*, *Treponema pallidum*, *Candida albicans*, *Chlamydia spp.*, and mycoplasmas.
11. Microbiological examination of blood – blood culture. Causes of septic conditions: obligatory pathogenic (*Salmonella typhi*, *Brucella spp.*, *Borrelia spp.*) and facultative pathogenic.
12. Problematic microorganisms causing healthcare-associated infections (HAIs) – *Pseudomonas spp.*, *Enterococcus spp.*, MRSA, *C. difficile*). Systemic mycoses, caused by *Candida*, *Aspergillus*, *Actinomyces*, *Cryptococcus*. Antimitotic therapy.
13. Microbiological diagnosis of diseases caused by viruses – HIV and hepatitis A, B, C D and E, influenza and coronaviruses – SARS-CoV-2.
14. Sanitary-microbiological examination of water, air, hospital environment. Sanitary-indicative microorganisms - *E. coli*, *Enterococcus spp.*, *C. perfringens*, staphylococci, streptococci. **TEST №2 (Exercises №8-13).**
15. **Recapitulation of the students' practical skills, acquired during the two semesters with an evaluation mark.**

Approved by: Assoc. Prof. M. Petrov, MD, PhD
Head of Dept. medical microbiology and
immunology „Prof. Dr. Elissay Yanev“