



Study program: Doctoral Academic Studies in Biomedical Sciences
Name of the subject: CAUSES OF INFECTIONS
Teacher(s): Ivana B. Hrnjaković Cvjetković, Gordana M. Smieško, Vera P. Gusman, Deana D. Medić
Status of the subject: elective
Number of ECTS points: 20
Condition: -
Goal of the subject: To achieve a comprehensive view of current facts in the field being studied in order to connect the and apply them in theory and practice.
Outcome of the subject Theoretical preparation for diagnosis and differential diagnosis. Preparation for work in practice, selection of appropriate methods and their interpretation.
Content of the subject <i>Theoretical lectures</i> <ol style="list-style-type: none"> 1. Causes of bacterial infections of the respiratory tract 2. Causes of bacterial infections of the urinary tract 3. Causes of bacterial infections of the gastrointestinal tract 4. Causes of sexually transmitted bacterial infections 5. Nosocomial infections and their causes 6. New knowledge about the causes of tuberculosis 7. Antimicrobial therapy (current attitudes) and bacterial resistance to antimicrobial drugs 8. New causative agents of bacterial infections and old causative agents with new properties. 9. Normal flora of the human body and opportunistic infections 10. Sanitary bacteriolog 11. New causes of parasitic and fungal diseases 12. Viral infections of the respiratory tract 13. Acute gastroenteritis of viral etiology 14. Hepatotropic and cardiotropic viruses 15. AIDS. Sexually transmitted viruses 16. Viral infections of the CNS 17. ARBO viruses 18. New viruses and their significance. Defective viruses and prions <i>Practical lectures</i> <ol style="list-style-type: none"> 1. Laboratory diagnosis of respiratory bacterial infection 2. Laboratory diagnosis of bacterial infections of the urinary tract and their therapy 3. Laboratory diagnosis of bacterial infections of the gastrointestinal tract 4. Current events in the diagnosis and therapy of sexually transmitted diseases 5. Laboratory diagnosis of pyogenic bacterial infections and sepsis. Interpretation of results. 6. Testing of bacterial susceptibility to antimicrobial drugs (new standards) 7. Laboratory diagnosis of parasitic and fungal infections 8. Application of serological diagnostics (possibilities of obtaining false-positive and false-negative results, overcoming existing problems and interpretations) 9. Molecular diagnostic methods and their application in rapid and early diagnosis 10. Application of electron and immunoelectron microscopy in the diagnosis of viral infections. Immunological tests and their application 11. Virus isolation and identification. Application of isolation method in rapid diagnostics. Interpretation of results 12. Influence of the type of patient material and sampling time on the choice of a certain diagnostic method and interpretation of results 13. Effect of physical and chemical agents on viruses. Principles of rational antiviral therapy (new understandings) 14. Virus genetics. Possibility of recombination, incorporation of the virus into the cell genome, rearrangement of cell genes.

Consequences of viral variability (variability)

15. Viruses in the environment

Recommended literature

Required

1. Ter Meulen V, Mahy BWJ. Topley & Wilson's Microbiology and microbial infections: Virology, Hodder Arnold UK, 2009.

Number of active classis

Theory: 60

Practice: 45

Methods of delivering lectures: Lectures, exercises, seminars

Evaluation of knowledge (maximum number of points 100)

activities during the lecture: 20

seminars: 10

SRW: 40

oral exam: 30