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| **Study program:** Doctoral academic studies **-** Chemistry | | |
| **Course title:** Chemical Microbiology (H302C) | | |
| **Name of lecturer/lecturers:** Aleksandra S. Đorđević | | |
| **Type of course:** elective | | |
| **Number of ECTS allocated:** 10 | | |
| **Course objectives**  Familiarizing students with modern theoretical knowledge in the field of chemical microbiology, characteristics of microorganisms, as well as with techniques of working in a microbiological laboratory and with using microbiological tests. | | |
| **Course outcomes**  Upon successful completion of this course, the student will be able to:  - distinguish and describe the structure of microorganisms (in addition to biological and chemical aspects),  - apply the basic principles of work in a microbiological laboratory,  - select and apply appropriate microbiological tests in the examination of organic compounds/mixtures. | | |
| **SYLLABUS**  *Lectures*  The field of microbiology and the goal of its study. Microbiological laboratory techniques. Basics of morphology and structure of microorganisms. Classification of microorganisms. Metabolism of microorganisms. Pathogenicity and virulence. Infections and infectious diseases. Effects of physical and chemical agents on microorganisms. Microbiological transformations and syntheses. Antibiotics and chemotherapeutic agents. Standard microbiological testing techniques. Standard strains and their isolates. | | |
| **References**  1. A. H. Rouz, Hemijska mikrobiologija, ICS Beograd, 1975; Prevod originala “Chemical microbiology”,  Butterworths, London.  2. B. Karakašević, Mikrobiologija i parazitologija, Medicinska knjiga, Beograd-Zagreb, 1987.  3. E. Nester et al., Microbiology-a human perspective, McGrow-Hill, New York, USA, 2009. | | |
| **Active teaching classes** | **Lectures:** 105 | **Laboratory work:** / |
| **Teaching mode:** lectures, seminars, consultations | | |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** | | |
| written exam - 50 points; oral exam - 10 points; seminars - 40 points | | |