|  |
| --- |
|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of sciences and mathematics, University of Nis  |
| **GENERAL INFORMATION** |
| Study program  | Biology |
| Study Module (if applicable) |  |
| Course title | **MICROBIOLOGY (BIO201)** |
| Level of study | ☐Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory ☐ Elective |
| Semester  |  ☐ Autumn ☐Spring |
| Year of study  | 2 |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Theory lessons: The development of microbiology as a science. Basic principles about viruses and subviral particles. Structure and genetics of microorganisms. The influence of environmental factors on nutrition, growth and reproduction of microorganisms. The cultivation of the microorganisms. The metabolism of the microorganisms. The taxonomy of microorganisms. The pathogenicity of microorganisms. Ecology and biotechnological applications of microorganisms. Practical lessons: Exercise, other forms of teaching, study and research work. Microscope and microscopy. Techniques of native and permanent praparations. The size of microorganisms. Gram staining. Staining of the spores. Microbiological laboratory and sterilization. Cultivation of the microorganisms. Direct and indirect methods for the determination of the number of microorganisms. Biochemical methods in microbiology. The influence of abiotic factors on the growth of microorganisms. Antibiogram. Microorganisms in air, land and water. |
| Teaching mode |  ☐Lectures ☐Group tutorials ☐ Individual tutorials ☐Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The aim of the course is to introduce the students with the basic principles of morphology, genetics, growth and reproduction, physiology, pathogenicity, taxonomy, ecology and application of microorganisms, primarily prokaryotes. This knowledge is the basis for other courses in the field of microbiology. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Upon completion of the course the student shoul be able to: understand and explain the basic characteristics and specificities of prokaryotic organisms; apply the acquired knowledge in application of the basic techniques and developing a skills in work with microorganisms in sterile conditions. |
| **LANGUAGE OF INSTRUCTION** |
| ☐Serbian (complete course) ☐ English (complete course) ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)☐Serbian with English mentoring ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **5** | **Written examination** | **20** |
| **Practical teaching** | **5** | **Oral examination** | **40** |
| **Teaching colloquia** | **15** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |