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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of sciences and mathematics, University of Nis  |
| **GENERAL INFORMATION** |
| Study program  | Ecology and Nature Protection |
| Study Module (if applicable) |  |
| Course title | **ECOLOGY OF MICROORGANISMS (ЕКОI33)** |
| Level of study | ☐Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory ☐ Elective |
| Semester  |  ☐ Autumn ☐Spring |
| Year of study  | 2 |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Theory lessons: Definition of the microhabitats and biogeosfere through biochemical cycling of carbon, nitrogen, sulfur, phosphorus and some metals. The concept of ecological valence and relationship of microorganisms to the abiotic and biotic environmental factors. Distribution of microorganisms in the atmosphere, hydrosphere and pedosphere. Ecological factors in controlling of microorganisms, the main application of ecological principles in biotechnology. Practical lessons: Basic sampling techniques for microbiological and environmental studying of microorganisms. Examination of the various groups of microorganisms, their presence and role in environment. The influence of environmental factors on the growth of microorganisms isolated from different environments (air, water and land). |
| Teaching mode |  ☐Lectures ☐Group tutorials ☐ Individual tutorials ☐Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Introducing students to the role of microorganisms in nature and the biogeochemical cycles of matter. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Upon completion of the course the student should be able to understud: 1. The role of microorganisms of different living environments in the biogeochemical cycles of matter; 2. The ecological relationships that microorganisms are established between themselves and with other groups of organisms (plants, animals and humans); 3. Reciprocal relationship of microorganisms and abiotic factors of different living environments fourth basic use of microorganisms in applied microbiology. |
| **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** | **10** |
| **Practical teaching** | **5** | **Oral examination** | **50** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |