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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Sciences and MathematicsDepartment of Biology and Ecology |
| **GENERAL INFORMATION** |
| Study program  | Biology |
| Study Module (if applicable) | / |
| Course title | Microorganisms in Biotechnology |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | first |
| Number of ECTS allocated | 7 |
| Name of lecturer/lecturers | Nataša M. Joković |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Training students to solve actual problems of everyday human life by finding solutions that already exist in nature or can be based on the known natural laws carried out in the laboratory due to the metabolic activities of microorganisms. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| The characteristics of the microorganisms used in biotechnology. General scheme of microbial processes. The synthesis of primary and secondary metabolites. Use of microorganisms, immobilized cells and enzymes in various industrial processes. The application of genetic engineering in biotechnology of microorganisms. The application of specific groups of microorganisms in biotechnology: applied bacteriology, applied algology and applied mycology. |
| **LANGUAGE OF INSTRUCTION** |
| [x] 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** |  | **Written examination** |  |
| **Seminar** | **70** | **Oral examination** | **30** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |