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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Technology Leskovac |
| **GENERAL INFORMATION** |
| Study program  | **Food Technology and Biotechnology** |
| Study Module (if applicable) | Food Technology, Biotechnology |
| Course title | Bioreactors |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | 3rd  |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Miodrag Lazić |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *The aim of the course is to provide adequate knowledge about the bioreactors at laboratory and industrial levels. This course provide knowledge about analysis, calculations, construction and application of bioreactors in biotechnology.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Microbiological processes in ideal bioreactors. Ideal batch, feed-batch, continuous and plug flow bioreactors. Comparison of the bioreactor productivity. Special ideal bioreactors (2 hours). Bioreactors for enzymatic processes, for plant and animal cells. Hydrodynamics and mass transfer in bioreactors. Heat transfer in bioreactors. Mechanical forces in the bioreactors. Design and scale-up of Bioreactors.** |
| **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** | **10** | **Written examination** | **30** |
| **Practical teaching** | **10** | **Oral examination** | **30** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |