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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 | | |
| Course title | | | | Bioprocess Engineering | | |
| Level of study | | | | ☒Bachelor ☐ Master’s ☐ Doctoral | | |
| Type of course | | | | ☒ Obligatory☐ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | 3rd | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Miodrag Lazić | | |
| 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 this course is to provideadequate knowledge of the biological processes in laboratory and industrial conditions. Course also provide connection between biological phenomena with the methodology of chemical engineering, integrating the biological, chemical and engineering disciplines all together.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Definition of biochemical engineering. Basic concepts of biotechnological processes. Biocatalysts, significant industrial biocatalysts. Isolation and selection of production microorganisms. The stoichiometry and thermodynamics of bioprocesses. The kinetics of microbial processes. Industrial nutrient medium. Sterilization (methods of sterilization, sterilization kinetics, sterilization of culture media (batch and continuous heat sterilization). Rheology, Monitoring and Bioprocess Control. The development of bioprocesses and isolation of the product. Economicsand Ecology of Bioprocesses.** | | | | | | |
| **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** | **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** | | | | | | |