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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | |  | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | FOOD TECHNOLOGY AND BIOTECHNOLOGY | | |
| Study Module (if applicable) | | | | Biotechnology module | | |
| Course title | | | | Kinetics of bioprocesses | | |
| Level of study | | | | ☒ Bachelor ☐ Master’s ☐ Doctoral | | |
| Type of course | | | | ☒ Obligatory ☐ Elective | | |
| Semester | | | | ☒ Autumn ☐ Spring | | |
| Year of study | | | | 3 | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Slavica Ilić | | |
| 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 provide students with adequate knowledge about the kinetics of bioprocesses, its analysis, calculations and application in the design of bioprocesses. This course is the emphasis placed on the kinetics of microbial growth. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Kinetic equation. The kinetics of enzymatic reactions. The stoichiometry of bioprocesses. The kinetic models of microorganisms growth. Lag phase of microorganisms growth. The exponential and slow phase of microorganisms growth. The growth inhibition by substrate and product. Kinetics of the regime hemostat growth. Kinetics of semi-continuous growth. Kinetics of filamentous microorganisms growth. | | | | | | |
| **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** | **none** | | **OVERALL SUM** | | | **100** |
| **Seminars** | **20** | |  | | |  |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |