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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Technology |
| **GENERAL INFORMATION** |
| Study program  | Food technology and biotechnology/Chemical engineering  |
| Study Module (if applicable) | Food technology/ Biotechnology/Pharmaceutical and cosmetic engineering  |
| Course title | Industrial microbiology |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory☒ Elective |
| Semester  | ☐ Autumn ☒Spring |
| Year of study  | III |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | dr Bojana Danilović |
| Teaching mode | ☒Lectures ☐Group tutorials ☐ Individual tutorials☒Laboratory work ☐ Project work ☒ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Introduction to the ways of isolation and improvement of production microorganisms, development of the various microbiological industrial processes and the role of microorganisms in industry. Getting knowledge of industrial microorganisms and their possibility to produce different metabolites from appropriate substrates. Achievement of more complete understanding of bioprocesses which are essential for the development of industrial biotechnological processes. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Characterisation of the production microorganisms and improvement of their technological properties. Microbial production of different primary and secondary metabolites. Substrates used for microbiological processes. Industrial microbiological processes of the production of organic acids, alcohol, vitamins, enzymes, polysaccharides, amino acids and antibiotics.****Analyses of the influence of different substrates to the production of microbial metabolites. Determination of the conditions suitable for the production of organic acids, polysaccharides, and ethanol. Techniques of monitoring of the microbial processes.**  |
| **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** | **20** |
| **Practical teaching** | **20** | **Oral examination** | **30** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |