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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Technology |
| **GENERAL INFORMATION** |
| Study program  | Technological Engineering |
| Study Module (if applicable) | / |
| Course title | Advances in surfactants |
| Level of study | ☐Bachelor ☐ Master’s ☒ Doctoral |
| Type of course | ☐ Obligatory☒ Elective |
| Semester  | ☒ Autumn ☒Spring |
| Year of study  | I year |
| Number of ECTS allocated | 8 |
| Name of lecturer/lecturers | GoranNikolić, DraganCvetković |
| Teaching mode | ☒Lectures ☐Group tutorials ☒ Individual tutorials☐Laboratory work ☐ Project work ☒ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Acquiring knowledge in the field of surfactants chemistry and their technological achievements in certain industries. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| To enable students for developing and application of scientific and professional achievements in selected technological processes that requires the use of surfactants, through next main subjects:The classification and properties of the surfactants and their phenomena. Complex structure of the surfactants. Analysis and characterization of surface active agents, as well as the impact of additives. Physical and chemical factors on micellar systems. The specific surfactants and hydrotropes. Surface active agents in a pharmaceutically-cosmetic, food and textile industry. Surfactants and detergents. Surfactants in agriculture. The polymer-surfactants systems. The surfactants and liquid crystals. Ecological aspects of surface-active substances. The methods of molecular dynamics simulation and surfactants. |
| **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** | **20** | **Written examination** |  |
| **Practical teaching** | **30** | **Oral examination** | **50** |
| **Teaching colloquia** | **/** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |