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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Science and Mathematics |
| **GENERAL INFORMATION** |
| Study program  | **Chemistry** |
| Study Module (if applicable) | / |
| Course title | H-306 Surfactants  |
| Level of study | ☐Bachelor ☐ Master’s X Doctoral |
| Type of course | ☐ Obligatory X Elective |
| Semester  |  X Autumn ☐Spring |
| Year of study  | First |
| Number of ECTS allocated | 8 |
| Name of lecturer/lecturers | Prof. dr Milena N. Miljkovic  |
| Teaching mode |  XLectures ☐Group tutorials ☐ Individual tutorials ☐Laboratory work ☐ Project work X Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Students acquire appropriate competences and PhD academic skills for the development and application of scientific and expert achievements connected to surfactants. Students are trained for independent scientific work that relates to exploration of new surfactants and their application in different areas of industrial production. Acquiring knowledge for understanding of processes defining chemical application of surfactants in different areas of industrial production.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **1. Chemical structure of surfactants; 2. Chemical classification of surfactants; 3. Cationic surfactants; 4. Nonionic and amphoteric surfactants; 5. Adsorption properties of surfactants; 6. Micelle formation and critical micellar concentration; 7. Solubilisation; 8. Wetting and foaming; 9. Emulsifying; 10. Washing; 11. Washing agents-detergents; 12. Application of surfactants in textile industry; 13. Surfactants as aids in textile finishing and production of chemical fibres; 14. Water in chemical finishing; 15. Chemical finishing of cellulose fibres.** |
| **LANGUAGE OF INSTRUCTION** |
| XSerbian (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** | **70** |
| **Practical teaching** |  | **Oral examination** | **20** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |