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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Technology |
| **GENERAL INFORMATION** |
| Study program  | chemical technologies, food technology and biotechnology |
| Study Module (if applicable) | pharmaceutical and cosmetic engineering, organic chemical technology and polymer engineering, ecological engineering, food technology |
| Course title | Colloid chemistry |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [x]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | II  |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Milorad Cakić, Goran Nikolić |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Gaining knowledge about the characteristics and behaviour of colloidal systems in processing and manufacturing in the chemical, pharmaceutical, cosmetic and food industries. Acquiring skills in characterization of colloidal systems. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Overcoming the basic principles that concerning the colloidal system. Knowing and adjust the properties of colloidal systems, the use of colloidal materials, especially macromolecules and micellar colloids, in heterogeneous high dispersible systems through next subjects: definition, classification of surfactants, dispersive systems, micellar colloids. Micelles in aqueous medium, micellar colloids. Purification and separation of colloids, osmosis, dialysis, decantation, gel filtration, preparative ultracentrifugation. Methods of size and shape determination. Kinetic properties of colloidal systems, optical phenomena in colloidal solution (refraction, light scattering, turbidity). The viscosity of dilute solutions of colloids and methods of measurement. Rheological properties of colloidal systems and methods of measurement. Electrical phenomena, stability and coagulation of colloids. Gels and emulsions. |
| **LANGUAGE OF INSTRUCTION** |
| [x] 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** | **20** |
| **Practical teaching** | **20** | **Oral examination** | **40** |
| **Teaching colloquia** | **/** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |