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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-313 Chemistry of dyes |
| Level of study | ☐Bachelor ☐ Master’s X Doctoral |
| Type of course | ☐ Obligatory X Elective |
| Semester  |  ☐ Autumn XSpring |
| 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)** |
| *Make PhD students capable for independent scientific work in chemistry of dyes. Subject introduces to students classification, structures, nomenclature, syntheses, properties and applications of dyes. Students are learnt to distinguish all dyes varieties based on different classifications and structures. They are acquiring knowledge to recognise different classes of dyes depending on applied nomenclature and on the basis of used substrate. Acquisition of knowledge necessary for advanced development of all areas of dyeing technology.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **1. Classification of dyes, history of dyes and pigments, dyes production; 2. Dyes of organic components; 3. Polyenes and polymethine dyes; 4. Di- and triarylmethyl dyes and their azo analogues; 5. Аzо [18] аnnulenes; 6. Nitro and nitroso dyes; 7. Аzо dyes and pigments; 8. Carbonyl dyes and pigments; 9. Sulfur dyes; 10. Fluorescent bleaches; 11. Application of dyes and organic pigments; 12. Photo-, thermo-, and electrochemical reactions of dyeing agents; 13. Dyeing agents in painting and data recording systems; 14. Dyes in biochemistry, biology, medicine and analytical chemistry; 15. Analysis, ecology and toxicology of dyeing agents.** |
| **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** |