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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Technology | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | CHEMICAL TECHNOLOGIES | | |
| Study Module (if applicable) | | | | ORGANIC CHEMICAL TECHNOLOGY AND POLYMER ENGINEERING,  PHARMACEUTICAL AND COSMETIC ENGINEERING | | |
| Course title | | | | Chemistry of polymers | | |
| Level of study | | | | ☒Bachelor ☐ Master’s ☐ Doctoral | | |
| Type of course | | | | ☒ Obligatory ☐Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | II | | |
| Number of ECTS allocated | | | | 5 | | |
| Name of lecturer/lecturers | | | | Jakov Stamenković | | |
| 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 basic terms in the field of polymer chemistry, so students could acquire basic knowledge of polymers and after that, able to receive an upgrade from polymer engineering and polymer technology* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Students should acquire basic theoretical knowledge about: 1. Basic terms of macromolecules and polymers classification. 2. Nomenclature of polymers and monomer reactivity. 3-5. Basic concepts of polymerization. 6. Basic concepts of copolymerization; 7-8. Basic concepts of polycondensation. 9-10. Chemical properties of polymers. 11-13. The aging of polymer; 14-15. Polymer solutions. Students should learn within laboratory work: 1. Polymerization of acrylonitrile. 2. Determination of the average molar mass by capillary viscometry. 3-4. Polymerization of acrylamide in organic solvents. 5-6. Emulsion polymerization of styrene. 7-8. Suspension polymerization of styrene. 9-10. Preparation of the formaldehyde resin with a basic catalyst. 11-12. Preparation of the formaldehyde resin with an acid catalyst. 13. Preparation of aniline-formaldehyde resins. 14. Preparation of a polyester-amide resin by polycondensation of phthalic anhydride glycerine. 15. Preparation of polyester by polycondensation of maleic anhydride and glycerol. | | | | | | |
| **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** | **5** | | **Written examination** | | | **/** |
| **Practical teaching** | **5** | | **Oral examination** | | | **50** |
| **Teaching colloquia** | **40** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |