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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of technology |
| **GENERAL INFORMATION** |
| Study program  | **Textile technologies** |
| Study Module (if applicable) | Industrial design of textile products module |
| Course title | Instrumental methods of textile testing |
| Level of study | ☐Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory ☒ Elective |
| Semester  |  ☒ Autumn ☐Spring |
| Year of study  | I |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Miodrag Stamenkovic |
| Teaching mode |  ☒Lectures ☐Group tutorials ☐ Individual tutorials ☒Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☒ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Obtaining knowledge of the specific test method of textiles. Knowing these methods, students are trained for scientific research, they can provide qualified answers to the appearance of defects in textiles and the causes that lead to them at the molecular and sub-molecular level.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| 1. The molecular weight of the polymer and curve of the distribution; 2. Determination of the molecular weight of the polymer by scattering of light and measuring osmotic pressure; 3. Determination of the molecular weight of the polymer by vapor pressure osmometry and viscosity; 4. Light-scattering photometry; 5. Theoretical basics of gel chromatography and elution diagrams; 6. Electron microscopy, principles and methods of measurement; 7. Scanning and transmission electron microscopy; 8. Preparing preparations for microscopy; 9. Basic of x-ray analysis; 10. The emergence of static electricity on textiles; 11. Methods for determining the static electricity; 12. Electrical resistance of textiles; 13. Methods of thermal analysis; 14. The ultrasonic methods fot testing textile materials; 15. Torsion deformation of textile materials and methods of stiffness in torsion. |
| **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** |