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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Technology, Leskovac |
| **GENERAL INFORMATION** |
| Study program  | Technological engineering |
| Study Module (if applicable) | - |
| Course title | Theory of fiber formation  |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [x] Spring |
| Year of study  | II |
| Number of ECTS allocated | 8 |
| Name of lecturer/lecturers | Dragan Djordjevic |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [x]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Students acquire knowledge, skills and ability to independently solve practical and theoretical problems in the field of fiber formation, to organize development and scientific research, including in the achievement of national and international research projects and realize the development of new technologies and production processes of fiber.Students develop the ability of critical analysis of existing knowledge and predictions, communicating on a professional level on the communication of research results at scientific conferences, scientific journals, through patents and new technical solutions. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| 1. The structure and properties of the polymer fibres.
2. Chemical reactions of polymers for fibre.
3. Modification of polymers for fibre.
4. The destruction and aging of polymer fibres.
5. The principles of the formation of fibers from the solution and the polymer melt.
6. Theoretical analysis of structural changes in the design of the polymer fibres.
7. Characteristics of the manufacturing processes of fiber from the solution of the polymer.
8. A modified conventional and unconventional methods of producing fibres.
9. The methods of forming the oriented fibres.
10. Theoretical approach of stretching and finishing tape and filaments.
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| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [x]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[x] 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** | **-** | **Oral examination** | **50** |
| **Teaching colloquia** | **45** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |