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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of technology | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Technological engineering** | | |
| Study Module (if applicable) | | | |  | | |
| Course title | | | | Design nonwoven materials | | |
| Level of study | | | | ☐Bachelor ☐ Master’s ☒ Doctoral | | |
| Type of course | | | | ☐ Obligatory ☒ Elective | | |
| Semester | | | | ☒ Autumn ☒Spring | | |
| Year of study | | | | I | | |
| Number of ECTS allocated | | | | 8 | | |
| Name of lecturer/lecturers | | | | Nenad Cirkovic | | |
| Teaching mode | | | | ☒Lectures ☐Group tutorials ☐ Individual tutorials  ☐Laboratory work ☐ Project work ☐ Seminar  ☐Distance learning ☐ Blended learning ☒ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *Acquiring theoretical and practical knowledge on structural and constructive parameters of non-woven textile products for different purposes.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **1. Characteristics and applications of nonwoven textiles;**  **2. Mechanical formation of felt with oriented position of fibers; the impact of fiber position on the characteristics of the nonwovens;**  **3. Cross and the combinedlaying of webs in felt; design of lines and features of felt;**  **4. Aerodynamic formation of felt; adjust aerodinamic converter with unoriented and longitudinal position of the fiber;**  **5. Design of felt characteristicswith anisotropic position of fibers;**  **6. Hydroformers; processes projecting and product characteristics;**  **7. Projecting the process of forming a felt from polymer melt (Spunbondid, meltblown);**  **8. Needled nonwovens; processes projecting and product characteristics;**  **9. Projecting characteristics of products and processes of Malivlies nonwovens;**  **10. Projecting characteristics of the product and technology Maliwatt Schusspol;**  **11. Projecting process of the formation of smooth and sampled Tufting flooring;**  **12. Chemical connecting of fibers in felt, characteristics, ability to filter;**  **13. Projecting process of finishing nonwovens;**  **14. Design of separation, diffusion and filtration properties of nonwoven textile materials;**  **15. Designing specific characteristics of non-woven textile materials intended for functional technical textile products.** | | | | | | |
| **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** | **25** | | **Written examination** | | |  |
| **Practical teaching** |  | | **Oral examination** | | | **25** |
| **Teaching colloquia** | **50** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |