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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 | Theoretical analyses of weaving process |
| 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 | Jovan Stepanović |
| Teaching mode | ☒Lectures ☐Group tutorials ☐ Individual tutorials☐Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The aim of the course:Gaining detailed knowledge about the manufacturing process of woven textile materials. Studying the behavior of the yarn in the process of preparation for weaving and in the process of making fabrics on a weaving loom. Defining the optimal process parameters in the production of fabrics.Outcome: Students are trained for independent research in the manufacturing process of textile materials and through seminary work they are trained for independent work with the scientific research in this field. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Course content:Analysis of technical and technological parameters in the process of weaving. Analysis of the behavior of the yarn in the process of rewinding the coils. Analysis of the behavior of the yarn in the process doubling and twisting. Analysis of parameters of warping. Defining optimal parameters sizing weaving warps. The influence of parameters of longitudinal elastic system on weaving machine on tension and strain of warp wires. Deformation of warp wire in the process of forming a shed. Analysis of tension force in the weft motion through the shed on theprojectile weaving machine. Analysis of tension force in the weft motion through the shed in the pneumatic weaving machine. Analysis of tension force in the weft motion through the shed in the rapier looms. Analysis of movements of the weftat looms with wavy shed. Analysis of movements of the weft at looms with a serial shed. Impact of nailing the weft on wire deformation. Analysis of the weaving machine downtime and errors on fabrics. Management and control of weaving process.  |
| **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** |