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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering |
| **GENERAL INFORMATION** |
| Study Program | **Mechanical Engineering** |
| Study Module (if applicable) | - |
| Course Title | Ergonomics and industrial design |
| Level of Study | ☒Bachelor | ☐ Master’s | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | IV |
| Number of ECTS Allocated | 5 |
| Name of Lecturer/Lecturers | Dragoslav B. Janošević |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| Fundamentals of ergonomics. The elements and forms of industrial and graphic design. The analysis methodology and process of ergonomic design and industrial and graphic design products. Ergonomic design and industrial design of mobile machines and vehicles. |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1) The definition of ergonomics, 2) Engineering psychology ergonomics, 3) Basis of anthropometry and biomechanics, 4) Ergonomic design principles and limitations of the workplace and space, 5) Zones of comfort and reach of management, 6) Factors of comfort: air conditioning, lighting, noise and vibration, 7) FOPS (Falling Objects Protective Structure) and ROPS (Roll Over Protective Structure) operator cab, 8) Definition of industrial and graphic design, 9) Elements and form design, 10) The process of development of industrial design products, 11) Detailed industrial and graphic design products, 12) Rapid Prototyping and product presentations. |
| **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** | **50** |
| **Practical Teaching** | **10** | **Oral Examination** | **Max. 35 (depending on Teaching Colloquia)** |
| **Teaching Colloquia** | **35** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |