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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 | Recycling Technology |
| Level of Study | ☒Bachelor | ☐ Master’s | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | IV |
| Number of ECTS Allocated | 7 |
| Name of Lecturer/Lecturers | Dragan Mišić |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| The course is conceived in such a way that students are introduced to the principles and limitations of material recycling, obtaining regranulate from secondary raw plastic masses, and obtaining metal from metallic secondary raw materials. Students acquire engineering knowledge necessary for further improvement in the area of plastics and metal recycling, technology design and environmental protection. |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1. Basic terms and definition of recycling, 2. Aims and importance of plastics and metal recycling. Recycling in the developed world. 3. Determining resources, organizing collection and preparation of plastic and metal waste. Shredding. Metallurgical processing of iron waste. 4. Collection, sorting and preparation of plastic waste. Processing of waste into regranulate. 5. Collection, sorting and preparation of aluminium waste for processing. Aluminium waste processing. 6. Copper waste, old copper, shavings, slag, coolers, sorting and preparation. Processing by melting. 7. Collection, sorting and preparation of automotive battery waste for processing. Processing of lead waste. 8. Collection and processing of batteries. 9. Regulations, legal framework, European declarations, economic and ecological aspectsof recycling. 10. Visits to recycling plants |
| **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** | **10** | **Written Examination** | **0** |
| **Practical Teaching** | **0** | **Oral Examination** | **20** |
| **Teaching Colloquia** | **70** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |