



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 | <input checked="" type="checkbox"/> Bachelor | <input type="checkbox"/> Master's | <input type="checkbox"/> Doctoral |
| Type of Course | <input type="checkbox"/> Obligatory | <input checked="" type="checkbox"/> Elective | |
| Semester | <input type="checkbox"/> Autumn | <input checked="" type="checkbox"/> Spring | |
| Year of Study | IV | | |
| Number of ECTS Allocated | 7 | | |
| Name of Lecturer/Lecturers | Dragan Mišić | | |
| Teaching Mode | <input checked="" type="checkbox"/> Lectures | <input type="checkbox"/> Group tutorials | <input type="checkbox"/> Individual tutorials |
| | <input checked="" type="checkbox"/> Laboratory work | <input checked="" type="checkbox"/> Project work | <input checked="" type="checkbox"/> Seminar |
| | <input type="checkbox"/> Distance learning | <input type="checkbox"/> Blended learning | <input type="checkbox"/> 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 aspects of 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**