SYLLABUS

1. Course title:

RAW MATERIAL PREPARATION AND MINERAL PROCESSING

2. Code:

LRUDPPMS

3. Cycle of study:

1

4. ECTS credits:

4

5. Type of course:

Mandatory

6. Prerequisites:

No

7. Class restrictions:

No

8. Duration / semester(s):

1 8

9. Weekly contact hours and student workload:

	Semester (1)	Semester (2)	(for two-semester courses)	Workload: (hours)	
9.1. Lectures	3		Classes:	45,00	
9.2. Seminars	0		Individual work:	71,42	
9.3. Laboratory / Practice classes	1		In total:	116,42	

10. Faculty:

Mining, Geology and Civil Engineering

11. Department/study program:

Mining Engineering

12. Lecturer:

PhD Nedžad Alić Full Professor

13. Course aims:

Introducing students to the fundamentals of mineral raw material preparation and its application in various industries. Students should understand the changes in the education system, where they are at the center of the learning process, as opposed to the traditional approach that focuses on the professor. From the very beginning of the course, they are

encouraged to actively participate in all teaching activities and obligations and establish two-way communication with the professor/assistant.

14. Learning outcomes:

At the end of the semester/course, successful students who have consistently fulfilled their obligations throughout the entire teaching period will be able to:

- **Use supplementary available literature to solve various problems related to this course;**
- **Solve problems of varying complexity, both individually and in teams, and present them in written or verbal form;**
- **Understand the significance of this course in solving various problems in practice/process industries;**
- **Pass the final exam in the first scheduled exam periods at the end of the semester.**

15. Course content:

Introduction:
Presentation of the course syllabus for Mineral Raw Material Preparation (literature, course content, course objectives, expected communication outcomes, teaching and assessment methods, and additional course-related information).
General Concepts of Mineral Raw Material Preparation:
General properties of mineral raw materials relevant to PMS processes
Comminution:
Crushing
Classification by particle size – screening
Grinding
Sieving
Classification in fluids
Gravity concentration:
In a dense medium
In water fluid (coarse fraction)
In water fluid (fine fraction in a thin water stream)
In air fluid
In a pseudo-suspension
Magnetic concentration methods
Electrical concentration methods
Special beneficiation methods
Separation of solids from liquids, dewatering, and drying
Environmental protection in PMS

16. Learning methods:

Lectures, exercises, consultations, project work

- **Lectures and exercises are interactive and practical in nature**

17. Assessment methods:

Student Assessment Methods:
Student evaluation is based on the following criteria:

- **Attendance and participation in lectures and exercises**
- **Individual and team projects**
- **Tests**
- **Final exam**

At the end of the course, the final grade is determined based on the scoring of individual activities.

18. Assessment components:

Student Assessment and Grading System
Evaluation Criteria and Points Distribution:
Attendance and participation in class – 10 points:
Active participation in class: 5 points
Attendance and participation in exercises: 5 points
Individual and team work – 40 points:
Individual project: 20 points
Team/group project: 20 points
Pre-exam activities – 50 points
Final exam – 50 points
Final Student Assessment:
After completing all required knowledge assessments, the final grade is assigned using a system comparable to the ECTS grading scale, as follows:

- **10 (A) – Outstanding performance with no or minimal errors: 95–100 points**
- **9 (B) – Above average, with some errors: 85–94 points**

- **8 (C) – Average, with noticeable errors: 75–84 points**
- **7 (D) – Generally good, but with significant deficiencies: 65–74 points**
- **6 (E) – Meets minimum criteria: 54–64 points**
- **5 (F, FX) – Does not meet minimum criteria: Less than 54 points**

19. Mandatory reading list:

N. Alić, I.Šišić, A.Softić : Usitnjavanje u pripremi mineralnih sirovina (Tuzla, 2020)
N. Alić : Klasiranje mineralnih sirovina (Tuzla, 2022)
N. Ćalić: Teorijske osnove pripreme mineralnih sirovina (Beograd 1990.g.)

20. Additional reading list:

. Jevremović: Priprema mineralnih sirovina (Tuzla 1984.g.)
M. Manojlović Gifing: Priprema mineralnih sirovina (Beograd 1976.g.)

21. Web sources:

22. Applicable from the academic year:

2025/26.

23. Adopted in the Faculty/Academy session: