

SYLLABUS

1. Course title:

MATERIALS IN MINING ENGINEERING

2. Code:

LRUDMR

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

Mandatory

6. Prerequisites:

No

7. Class restrictions:

No

8. Duration / semester(s):

1

3

9. Weekly contact hours and student workload:

10. Faculty:

Mining, Geology and Civil Engineering

11. Department/study program:

Mining Engineering

12. Lecturer:

PhD Nedžad Alić Full Professor

13. Course aims:

Familiarization with the general properties of technical materials primarily used in mining.

14. Learning outcomes:

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

- Utilize supplementary available literature related to solving various problems covered in 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 industry;
- Pass the final exam in the first scheduled exam periods at the end of the semester.

15. Course content:

Lectures: Introduction, General and Specific Properties of Materials, Technology of Production of Classical and Modern (Emulsion) and Deflagrating Explosives and Initiating Agents. Optimization of AN-FO Explosive Ingredients. Testing of Explosives and Initiating Agents. Technology of Production of Portland and Other Types of Cement; Selection and Mine Control of Raw Components in Quarries in the Production of Limestone and Other Materials Used in the Composition of Portland and Other Types of Cement. Cement Testing. Technology of Lime Production, Hydrated Lime, Selection, and Mine Control of Raw Components in Quarries. Lime Testing. Technology of Gypsum Production and Control of Raw Components in Quarries in the Production of Gypsum Boards. Gypsum Testing. Water as an Ingredient Material in Mining Materials: Technological Process of Wastewater Treatment in the Production of Mining Materials. Bricks, Brick Testing. Metals and Alloys, Testing of Metals and Alloys. Wood, Wood Testing.

16. Learning methods:

- Lectures, exercises, consultations
- Lectures and exercises are interactive and practical in nature

17. Assessment methods:

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

18. Assessment components:

Criteria:

- Class activity: 10 points
- Attendance and participation in exercises: 5 points
- Individual project: 30 points
- Quiz/Test: 5 points

Pre-exam obligations: 50 points

Final exam: 50 points

The final student achievement, after all the prescribed forms of knowledge assessment, is evaluated and graded using a system comparable to the ECTS grading scale as follows:

- a) 10 (A) – Outstanding performance with no or minor errors, 95-100 points
- b) 9 (B) – Above average, with some errors, 85-94 points
- c) 8 (C) – Average, with noticeable errors, 75-84 points
- d) 7 (D) – Generally good, but with significant shortcomings, 65-74 points
- e) 6 (E) – Meets minimum criteria, 54-64 points
- f) 5 (F, FX) – Does not meet minimum criteria, less than 54 points

19. Mandatory reading list:

1. Omeragić T. : Tehnologija rudarskog materijala, Univerzitet u Tuzli, 1982 godina;

20. Additional reading list:

1. Trifunović P. i ostali : Rudarski materijali, RGF Univerziteta u Beogradu, 1999 godina,
2. Muravljev M. : Građevinski materijali, GIP Građevinska knjiga, Beograd

21. Web sources:

22. Applicable from the academic year:

2025/26

23. Adopted in the Faculty/Academy session: