

SYLLABUS

1. Course title:

GEOTECHNICAL WORKS

2. Code:

LRUDGTHR

3. Cycle of study:

1

4. ECTS credits:

4

5. Type of course:

Elective

6. Prerequisites:

No

7. Class restrictions:

No

8. Duration / semester(s):

1

7

9. Weekly contact hours and student workload:

| | Semester (1) | Semester (2) | (for two-semester courses) | Workload: (hours) |
|------------------------------------|--------------|--------------|----------------------------|------------------------|
| 9.1. Lectures | 2 | | | Classes: 33,75 |
| 9.2. Seminars | 0 | | | Individual work: 69,58 |
| 9.3. Laboratory / Practice classes | 1 | | | In total: 103,3 |

10. Faculty:

Mining, Geology and Civil Engineering

11. Department/study program:

Mining Engineering

12. Lecturer:

PhD Sabid Zekan Full Professor

13. Course aims:

The goal of the course is to enable students to independently solve engineering problems in the field of geotechnics, lead cost-effectiveness in operations by applying acquired knowledge, and innovate new methods and technologies in engineering through the application of geotechnics as an engineering discipline.

14. Learning outcomes:

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

- Independently solve technical problems in the field of geotechnics as an engineering discipline
- Use literature to solve problems in the field of geotechnics
- Understand the importance of this course in solving practical problems
- Apply acquired knowledge in the scientific-research process during and after completing their studies
- Participate in the scientific-research process at the home department
- Use knowledge and skills gained during their studies to prepare for geotechnics as a specialized field.

15. Course content:

Introduction

- Road embankments and flood defense embankments
- Geosynthetics
- Landslide investigation and remediation
- Drainage and drainage systems
- Geosidra
- Slope stabilization
- Shallow foundations
- Deep foundations
- Dams
- Injection
- Landfills
- Numerical methods in geotechnics

16. Learning methods:

- Lectures • Exercises • Seminar Papers

The student is required to regularly attend lectures and exercises throughout the semester. They are also obligated to complete seminar papers. During the teaching process, the student is expected to actively participate, which includes engaging in discussions with the instructor regarding any uncertainties related to the material being studied.

17. Assessment methods:

The methods of evaluating students include the following criteria:

- Attendance at Lectures
- Attendance at Exercises
- Seminar Paper I
- Seminar Paper II
- Final Exam

18. Assessment components:

The total number of points is calculated by summing the maximum possible points from all activities during the semester:

- Attendance at Lectures: 5 points
- Attendance at Exercises: 5 points
- Seminar Paper I: 40 points
- Seminar Paper II: 40 points
- Pre-exam Obligations: 90 points
- Final Exam: 10 points
- Total: 100 points

The final evaluation of the student, based on all forms of knowledge assessment, is rated and graded using a system comparable to the ECTS grading scale as follows:

- 10 (A) - Exceptional performance with no or minimal errors, earning 95-100 points;
- 9 (B) - Above average, with a few errors, earning 85-94 points;
- 8 (C) - Average, with noticeable errors, earning 75-84 points;
- 7 (D) - Generally good, but with significant deficiencies, earning 65-74 points;
- 6 (E) - Meets minimum criteria, earning 54-64 points;
- 5 (F, FX) - Does not meet minimum criteria, earning less than 54 points.

19. Mandatory reading list:

1. M. Selimović: Mehanika stijena I, II i III dio
2. S. Zekan, M. Hodžić: Laboratorijska geotehnika
3. R. Čulibrk: Geotehnika u niskogradnji

20. Additional reading list:

21. Web sources:

22. Applicable from the academic year:

23. Adopted in the Faculty/Academy session: