

## Tárgytematika / Course Description

### Geotechnics 2

EKNB\_SETA007

Tárgyfelelős neve /

Teacher's name: dr. Wolf Ákos

Félév / Semester: 2022/23/1

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 2/1/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

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### OKTATÁS CÉLJA / AIM OF THE COURSE

As a continuation of Geotechnics I, students will learn the theoretical basics of earth statics problems (earth pressure, slopa stability problem, bearing capacity of soil under foundation, compressibility of soil) and the most important traditional calculation procedures in the first half of the semester. In the second half of the semester the fundamental of geotechnical design of shallow and deep foundations will be introduced. This will include the design process of foundations, the conceptual design and the construction techniques. At the end of the semester, students will be introduced to the basics of computer-based methods

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### TANTÁRGY TARTALMA / DESCRIPTION

A lectures focus on the following topics:

- soil static problems: earth pressure, slope stability analysis, bearing capacity of shallow foundation, settlement of shallow foundation,
- basics of geotechnical design
- foundations: construction and design of shallow and pile foundationa,

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### SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

#### *Short tests (30 points):*

There will be 4-5 short tests during the semester. The tests will be written in the beginning of lessons, there will take 10-15 minutes. Every test consists of 5-8 true or false questions, quiz questions (etc). There will be 30 questions in total during the semester. The test dates will be announced during the previous class.

#### *Assignments (70 points):*

There will be 5 assignments ont he following topics:

- earth pressure calculation

- slope stability analysis
- calculation of bearing capacity of shallow foundation
- settlement calculation of shallow foundation
- design of pile foundation

***Exam test (50 points):***

The course is closed by a test exam. The test consists of 35-40 questions about what has been learned during the semester.

Conditions for the acceptance of the semester (teacher signature):

- minimum 50% from the short tests (minimum 15 points)
- minimum 50% from the assignments (minimum 35 points)

Conditions for the pass the exam:

- minimum 50% from the exam (minimum 25 points).

Final grade:

Points	Evaluation érdemjegy
0-74	1 (fail)
75-91	2
92-109	3
110-127	4
128-150	5 (excellent)

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**KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**