



Tárgytematika

Félév: 2020/21/2

Tárgynév: Geotechnics 2 (Earth Structures)

Tárgykód: PMTATNB134CA

Felelős szervezet neve:	Anyagtan, Geotechnika és Közlekedésépítés Tanszék
Felelős szervezet kódja:	MIK-AT
Tárgyfelelős neve:	Dr. Józsa Vendel
Tárgy követelménye:	Évközi jegy
Tárgy heti óraszám:	1/1/0/0
Tárgy féléves óraszám:	0/0/0/0

Oktatás célja:

This course is aimed to provide basic and advanced knowledge on the principles and design of the different type of retaining structures. Topics covered by the course include: soil site explorations, Earth pressures, retaining walls, sheet pile walls, supported deep excavation, and soil improvement.

This course is designed to teach students how classify the soil. Explain different techniques of soil site explorations. Explaining and discussing methods of designing different types of retaining walls. Explaining and discussing methods of designing different types of sheet pile walls. Teaching students different methods of soil improvement, Site Dewatering, and supported deep excavation.

Students will gain from this course:

- knowledge of soil exploration and lateral earth distribution
- Understanding and Practical knowledge of retaining structures design.

Knowledge of Ground improvement and supported deep excavation.

Tantárgy tartalma:

Online Lectures: will give the basis of soil exploration, lateral earth distribution and geotechnical design of retaining structures

Schedule:

Week	Topic of lecture
Week 1	Course description. Orientation.



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Tantárgy tartalma:

Week 2	Introduction in Geotechnical Engineering,
Week 3	Lateral earth pressure (at rest – active – passive)
Week 4	Earth pressure Distribution
Week 5	Practical for Earth pressure Distribution,
Week 6	Types and definition of earth retaining structures Retaining walls (Gravity – cantilever – counterfort)
Week 7	Spring Break
Week 8	Online Lecture_Stability of Retaining walls
Week 9	Online Lecture_Practical for Retaining walls
Week 10	Online Lecture_Sheet Pile walls (Gravity – Cantliver– strutted)
Week 11	Online Lecture_Practical for Sheet Pile walls
Week 12	Online Lecture_Anchored Sheet Pile
Week 13	Online Lecture_Supported deep foundation
Week 14	Online Lecture_Ground improvement and dewatering systems
Week 15	Online_Final exam.

Számonkérési és értékelési rendszere:



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Számonkérési és értékelési rendszere:

Attending is required all online classes, and will impact the grade (max. 10%). Unexcused absences will adversely affect the grade, and in case of absence from more than 30% of the total number of lesson will be grounds for failing the class. To be in class at the beginning time and stay until the scheduled end of the lesson is required, tardiness of more than 20 minutes will be counted as an absence. In the case of an illness or family emergency, the student must present a valid excuse, such as a doctor's note.

Grading:

10% - Attendance online lectures

25% - Homework

25%- Mid-Term Exam online

40% - Final Exam online

Offered exam grade:

Evaluation in percents	Numeric grade
89%-100%	5
77%-88%	4
66%-76%	3
55%-65%	2
0-54%	1

Kötelező irodalom:

- **Presentations**
- **Farkas, J., Józsa, V., Szendefy J. (2014): Foundation Engineering, elektronikus angol BSc**



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Kötelező irodalom:

egyetemi jegyzet, BME, Geotechnikai Tanszék p. 97.

- *Holtz, R.D. and Kovacs, W.D. (1981): An Introduction to Geotechnical Engineering, Prentice Hall.*