

## Tárgytematika / Course Description

### Geotechnical structures and technologies

NGM\_SE114\_1

**Tárgyfelelős neve /**

**Teacher's name:** Koch Edina

**Félév / Semester:** 2020/21/2

**Beszámolási forma /**

**Assesment:** Folyamatos számonkérés

**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

Develop engineering capabilities to select, design, construct, and monitor geotechnical structures for their full life cycle by balancing functional requirements, environmental constraints, available technologies and economical aspects.

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### TANTÁRGY TARTALMA / DESCRIPTION

Topics

1. Introduction. Development of structures, equipments
2. Piling technologies
3. Site visit
4. Diaphragm walls, pile walls, sheet pile walls,
5. Anchors
6. Team work - retaining walls
7. Ground improvement by grouting
8. Jet grouting + Deep mixing
9. Team work - ground improvement
10. Dewatering
11. Geotechnical project management , QCQA
12. Student's presentation
13. Final exam

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

Assignments

HF1 Evaluation of English technical paper, presentation

HF2 Design problem (Proposal)  
ITV Final written exam

Final exam will be offered by 4 occasions through the Neptun system.  
Examination will be closed book/closed notes it consists of a 60 minute test of 30 questions

Course Grade Evaluation  
Class activity – 20 points,  
HF1 –10 points,  
HF2 – 30 points,  
ITV – 40 point

Grades  
0 - 49 points 1 unsatisfactory  
50 - 61 points 2 satisfactory  
62 - 73 points 3 fair  
74 - 85 points 4 good  
86 - 100 points 5 excellent

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### **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

M.J. Tomlinson and R. Boorman: Foundation design and construction, Pearson Education Limited, 2001.  
U. Smolczyk : Geotechnical Engineering Handbook, Volume 1-3, Ernst and Sohn, 2003.  
European Normal (Eurocode) Execution of Special Works, European Standards.  
M.P. Moseley, K. Kirsch, ed: Ground Improvement, Taylor and Francis, London, 2004.  
Ben Fleming, Austin Weltman, Mark Randolph, Keith Elson: Piling Engineering, 3rd Edition, CRC Press, 2014.  
Paolo Croce, Alessandro Flora, Giuseppe Modoni: Jet Grouting: Technology, Design and Control, CRC Press, 2014.