

Tárgytematika / Course Description

Geotechnical structures and technologies

NGM_SE114_1

Tárgyfelelős neve /

Teacher's name: Koch Edina

Félév / Semester: 2022/23/2

Beszámolási forma /

Assesment: Folyamatos számonkérés

Tárgy heti óraszám /

Teaching hours(week): 2/1/0

Tárgy féléves óraszám /

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

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.

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

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'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

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.
EuropeanNormal (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.