

## Tárgytematika / Course Description Geotechnical structures and technologies

EKNM\_SETA021

Tárgyfelelős neve /

Teacher's name: Koch Edina

Félév / Semester: 2023/24/2

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

Objectives: Encourage the development of an engineering attitude that allows graduate engineers to design and construct geotechnical structures for full life cycle by balancing functional requirements, environmental constraints, available technology and economical aspects.

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### TANTÁRGY TARTALMA / DESCRIPTION

#### Cources

Development of structures, equipments

Piling methods I.

Piling methods II.

Diaphragm wall, pile wall, sheet pile wall

Ground anchors

Ground improvement by grouting

Jet grouting

Deep mixing

Dewatering

Geotechnical projectmanagement

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## SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

### **Homework assignments**

*HW1 Evaluation of English technical paper, presentation*

*HW2 Solving a technological 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.

Two part exam

- Part I consists a 45 minute test of 40 questions
- Part II: Solve and discuss a practical construction/design problem. (e.g. excavation support)

**Course Grade Evaluation** Class activity – 30 points, HF1 –10 points, HF2 – 10 points, ITV – 50 point

### **Grades**

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

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## KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

### **Literature**

#### **Required**

John Woodward: **An Introduction to Geotechnical Processes**, CRC Press,2005.

U.Smoltczyk szerk.: **Geotechnical Engineering Handbook Volume 1-3**, Ernst and Sohn, 2003

Moseley, M. P., Kirsch, K. ed. **Ground Improvement**. Taylor and Francis, London, 2004.

Ken 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.

***Selected papers***

***Recommended***

Execution of Special Geotechnical works – European Standards

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**AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL**