

## Tárgytematika / Course Description

### Geotechnical design I.

NGM\_SE112\_1

**Tárgyfelelős neve /**

**Teacher's name:** dr. Ray Richard Paul

**Félév / Semester:** 2015/16/2

**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

The aim of this course is to enlarge the knowledge acquired on BSC on the scope of geotechnical design.

The subject want to improve the skill and thinking of geotechnical design with the famailiarization and practice of the decision-making techniques, design methods, etc.. The following main topics will be discussed: data and information gathering; techniques of data analysis; design considerations and requirements; techniques of selecting the optimal technical and economical solutions, calculation methods includin both traditional calculations and fem design.

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### TANTÁRGY TARTALMA / DESCRIPTION

Main topics of the presentations:

- Geotechnical design according to Eurocode 7 and 8.
- Shallow foundations design
- Deep foundation design
- Design os excavations
- FEM analysis

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

There are 3. homework:

HW1: Compiling of a geotechnical task list for a project with the investigation plan

HW2: Shallow foundation analysis with AXIS WM software

HW3: Pile foundation design based on CPT tests

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### KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Smoltzczyk szerk.: Geotechnical Engineering Handbook Volume 1-3, Ernst and Sohn, 2003.

[Richard P. Ray: Design practice for tieback excavation in the U.S.](#)