

Tárgytematika / Course Description

Case studies in geotechnics

NGM_SE115_1

Tárgyfelelős neve /

Teacher's name: dr. Ray Richard Paul

Félév / Semester: 2017/18/1

Beszámolási forma /

Assesment: Folyamatos számonkérés

Tárgy heti óraszám /

Teaching hours(week): 2/0/0

Tárgy féléves óraszám /

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

OKTATÁS CÉLJA / AIM OF THE COURSE

Aim of the course is to expand the student's previous knowledge about geotechnics and to provide students with a comprehensive engineering approach through case studies. This will be done by presenting the geotechnical design process as well as the construction of various infrastructure works (bridge, underpass, retaining structure, excavations), with an emphasis on damages or failures connected to geotechnical activity or the soil surrounding. By presenting economical aspects as well as the importance of risk management, the student's complex engineering approach will develop. The case studies will be focused on the followings.

TANTÁRGY TARTALMA / DESCRIPTION

The case studies will be focused on the followings.

Embankments, retaining structures, foundations of roadway and railway bridges, underpasses, excavation pits. Presenting the project sequence: importance of geotechnical investigations in the preparation phase, finding the optimal foundation solution, geotechnical structures and technologies. Quality assurance system, monitoring for risk management. Typical design errors and construction mistakes and their effect on the maintenance of the structure.

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

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.](#)