

## COURSE SYLLABUS AND COURSE REQUIREMENTS 2025/2026. II. SEMESTER

<i>Course title</i>	<i>Soil-Structure Interaction</i>
<i>Course Code</i>	MSM138ANEP
<i>Hours/Week: le/pr/lab</i>	2/0/0 (2., 4., 6., 7., 10., 13., 14., week (09:30-12:45) A301
<i>Credits</i>	2
<i>Degree Programme</i>	Structural Engineering MSc./ obligatory
<i>Study Mode</i>	full time
<i>Requirements</i>	semester grade with signature
<i>Teaching Period</i>	MSc 2. semester (spring)
<i>Prerequisites</i>	-
<i>Department(s)</i>	Department of Civil Engineering
<i>Course Director</i>	
<i>Teaching Staff</i>	Dr. Vendel JÓZSA, assistant professor
<i>Hours/Week: le/pr/lab</i>	Dr. Vendel JÓZSA <i>tel: 30-395-1807</i> <i>jozsavendel@gmail.com</i>

### COURSE DESCRIPTION

*This course aims at teaching the basics of soil mechanics connecting to the (geotechnical) structures and covers the following topics: basics of Eurocode 7, equilibrium states and conditions of equilibrium; deep excavation; anchoring; monitoring systems, foundations.*

### SYLLABUS

#### 1. GOALS AND OBJECTIVES

*This subject intends to provide students with knowledge in the basics of geotechnical serviceability and ultimate limit state, excavation methods, and lateral supporting systems (e.g. braced excavation, top-down,- anchored method), retaining walls, strutting systems, foundation design. An additional objective is to prepare students with a basic knowledge for compare monitoring, - and calculated results.*

*Students will gain from this course:*

*Knowledge of equilibrium states,  
Practical knowledge of excavation methods,  
Understanding of monitoring systems.*

#### 2. COURSE CONTENT

*Neptun: Instruction/Subjects/Subject Details/Syllabus/Subject content*

#### TOPICS

##### LECTURE

2-4. Soilmechanical parameters, definitions, Home work preparation  
6-7. Special deep foundations, deep excavations, Raft foundation with piles, Case studies, complex design  
10-13. Anchors, stone column, jet grouting, stabilization methods  
**13. week: exam**  
14. Home work presentations, Second exam (only if required)

#### 3. ASSESSMENT AND EVALUATION

##### ATTENDANCE

*In accordance with the Code of Studies and Examinations of the University of Pécs, Article 45 (2) and Annex 9. (Article 3) a student may be refused a grade or qualification in the given full-time course if the number of class absences exceeds 30% of the contact hours stipulated in the course description.*

##### **Method for monitoring attendance**

attendance sheet

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## Course resulting in mid-term grade (PTE TVSz 40§(3))

**Mid-term assessments, performance evaluation and their ratio in the final grade** (The samples in the table to be deleted.)

Type	Assessment	Ratio in the final grade
exam	50 point	50 %
Home work	50 point	50 %
full:	100 point	100 %

### Opportunity and procedure for re-takes (PTE TVSz 47§(4))

The specific regulations for improving grades and resitting tests must be read and applied according to the general Code of Studies and Examinations. E.g.: all tests and assessment tasks can be repeated/improved at least once every semester, and the tests and home assignments can be repeated/improved at least once in the first two weeks of the examination period.

### Grade calculation as a percentage

Course grade	Performance in %
excellent (5)	85 % ...
good (4)	70 % ... 85 %
satisfactory (3)	55 % ... 70 %
pass (2)	40 % ... 55 %
fail (1)	below 40 %

The lower limit given at each grade belongs to that grade.

### Re-takes for the end-of-semester signature (PTE TVSz 50§(2))

The specific regulations for grade betterment and re-take must be read and applied according to the general Code of Studies and Examinations. E.g.: all the tests and the records to be submitted can be repeated/improved each at least once every semester, and the tests and home assignments can be repeated/improved at least once in the first two weeks of the examination period.

## 4. SPECIFIED LITERATURE

In order of relevance. (In Neptun ES: Instruction/Subject/Subject details/Syllabus/Literature)

### RECOMMENDED LITERATURE AND AVAILABILITY

Bond, A. and Harris A. (2008): Decoding Eurocode 7, London: Taylor & Francis.

Chang Y.O. (2006): Deep Excavation, Theory and Practice, London: Taylor & Francis.

Das, B.M. (1998): Principles of Geotechnical Engineering, 4th edition, PWS Publishing Company.

Farkas, J., Józsa, V., Szendefy J. (2014): Foundation Engineering, BME, p. 97.

Presentations