

# COURSE SYLLABUS AND COURSE REQUIREMENTS

## 2023/2024. I. SEMESTER

<i>Course title</i>	<i>Geotechnical design</i>
<i>Course Code</i>	MSM139ANEP
<i>Hours/Week: le/pr/lab</i>	2/1/0 (2., 5., 6., 8., 10., 12. week 11:15-14:45) A302
<i>Credits</i>	3
<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 1. semester (fall)
<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 <u>tel: 30-395-1807</u> jozsavendel@gmail.com

## COURSE DESCRIPTION

*This course provides students with a useful knowledge concerning for geotechnical design, ground investigation and testing, ground characterization, design of shallow foundation and deep foundation. This course covers the following topics: Basis of geotechnical investigation and design report, general rules for geotechnical design, evaluation and presentation of geotechnical information, in-situ and laboratory test methods, soil classification by earthquake parameters, ground water level analysis, geological maps.*

## SYLLABUS

### 1. GOALS AND OBJECTIVES

*Students will gain from this course:*

*Knowledge of preparation of ground investigation,  
Practical knowledge of selecting the locations of investigation points,  
Understanding of the interpretation method of geotechnical results....*

### 2. COURSE CONTENT

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

## TOPICS

LECTURE	TOPICS
	<i>Topic of lecture</i>
	<i>Week 2 Course description. Orientation. Geotechnical investigation report</i>
	<i>Week 5 Geotechnical design report</i>
	<i>Week 6 Design of shallow foundation, Calculation methods of settlements</i>
	<i>Week 8 Midterm Homework. 1st presentation Classification of deep foundations. Design of deep foundation</i>
	<i>Week 10 Final exam</i>
	<i>Week 12 Retaining structures. Second exam (only if required).</i>
PRACTICE	<i>Calculation examples related to the lectures</i>

### 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

#### **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
<i>exam</i>	<i>50 pont</i>	<i>50 %</i>
<i>Home work</i>	<i>50 pont</i>	<i>50 %</i>
<i>full:</i>	<i>100 pont</i>	<i>100 %</i>

#### **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.*

**Type of examination:** written

**The exam is successful if the result is minimum 40 %.**

#### **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.: Decoding Eurocode 7, London: Taylor & Francis 2008.

Farkas, J., Józsa, V., Szendefy J. (2014): Foundation Engineering, elektronikus angol BSc egyetemi jegyzet, BME, Geotechnikai Tanszék p. 97.

Presentations