COURSE SYLLABUS AND COURSE REQUIREMENTS
2025/2026. I. SEMESTER

Course title	*Geotechnical design*
Course Code	*MSM139ANEP*
Hours/Week: le/pr/lab	*2/1/0 (2., 4., 6., 10., 11., 13., 14. week Thursday 09:30-12:45) A314*
Credits	*3*
Degree Programme	*Structural Engineering MSc. / obligatory*
Study Mode	*full time*
Requirements	*semester grade with signature*
Teaching Period	*MSc 1. semester (fall)*
Prerequisites	*-*
Department(s)	*Department of Civil Engineering*
Course Director	
Teaching Staff	*Dr. Vendel JÓZSA, assistant professor*
Hours/Week: le/pr/lab	*Dr. Vendel JÓZSA tel: 30-395-1807 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	*Topic of lecture* *Week 2 Course description. Orientation. Geotechnical investigation report* *Week 4 Geotechnical design report* *Week 6 Design of shallow foundation, Calculation methods of settlements* *Week 10 Midterm Homework. 1st presentation Classification of deep foundations. Design of deep foundation* *Week 11 Final exam* *Week 13 Retaining structures. Second exam (only if required).*
PRACTICE	*Calculation examples related to the lectures*

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
exam	*50 pont*	*50 %*
Home work	*50 pont*	*50 %*
full:	*100 pont*	*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.

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