COURSE SYLLABUS AND COURSE REQUIREMENTS 2022/2023. I. SEMESTER

Course title	Geotechnical design
Course Code	MSM139ANEP
Hours/Week: le/pr/lab	2/1/0 (2., 4., 6., 8., 10., 12., 14. week 11:15-14:45) A302
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 <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		
	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 8 Midterm Homework. 1st presentation	
	Week 10 Classification of deep foundations. Design of deep foundation.	
	Week 12 Final exam	
	Week 14 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.)

Туре	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

- D.Kolymbas, Tunnelling and Tunnel Mechanics, Springer
- D. Chapman et al., Introduction to Tunnel Construction, Spon Press
- Lecture notes and slides