

Mon 26 Feb - Fri 12 Apr 2024 - Advanced soil mechanics D GEO-E2010

Week	Lectures: Mon & Wed (10:15 am) R2		Exercises and tutorials: Tue & Thu (10:15 am) Maari E 229, Maarintalo	
9	26.2	L1 Introduction/soil structure and microstructure	27.2	Laboratory exercise: Introduction and report. (ML, SM, ALR)
9	28.2	L1 Introduction/soil structure and microstructure	28.2 14.15-17 R124	Laboratory exercise, geotechnical laboratory, Group 1 R124 (ML, SM, ALR)*
9			29.2	Design exercise slope stability (HG)
10	4.3	L2 Real soil behaviour & advanced soil testing	5.3	T1 Mohr Coulomb Model (WS, DM)
10	6.3	L3 Mohr-Coulomb Model & Elastic models for soil	7.3 9.15?	T: Q&A before test 1 (WS), TBD?
10			7.3 10.15	C1 Settlements 1 (HG, ALR)
10			11.3, 13.15-16	Laboratory exercise, Group 2 geotechnical laboratory R124 (ML, SM, ALR)*?
11	11.3	Test 1 (L 1-3)	12.3	C2 Settlements 2 (HG, ALR)
			13.3 16.15-17	Laboratory: the shearing stage of the triaxial test starts, R124
11	13.3	L4 Limit analysis	14.3	C3 Sheet pile wall (HG, ALR)
12	18.3	L5 Slope Stability	19.3	L7 Water flow and seepage C4 Water flow & seepage (WS, DM)
12			21.3 9.15?	T: Q&A before test 2?
12	20.3	L6 Earth pressures & retaining walls	21.3	C4 Water flow & seepage (WS, DM)
13	25.3	Test 2 (L 4-7) L8 Introduction to Critical State Soil Mechanics. Modified Cam Clay model	26.3	T2 Critical State Soil Mechanics (WS, DM)
13	27.3	L9-10 Modified Cam Clay Model and SCLAY-1 model	27.3	Deadline for the return of the laboratory exercise (ML, ZL, ALR)
14		Easter Break	4.4	T3 Modified Cam Clay Model and T4 SCLAY1 (WS, DM) Q&A before test 3?
14			5.4	Deadline for return of the design exercise (HG)
15	8.4	Test 3 (L 8-10) L11 Interaction between soil and structures	9.4	C5 Soil–structure interaction (WS, DM)
15	10.4	L12 Risk-based design	11.4	C5 Soil–structure interaction (WS, DM)

***There may be an extra laboratory session on the 8th of March organised in the case of a large number of students attending the course. ? indicate a session that may be organised upon request. Changes are possible and will be advertised in MyCourses**

Teachers: WS – Wojtek Sołowski, HG – Henry Gustavsson, ML – Monica Löfman, DM – Debasis Mohapatra, ALR – Alejandra Lopez Ramirez, SM – Saeideh Mohammadi. **Symbols:** L – lecture, C – calculation exercise, T – tutorial, TBD – to be decided on the first lecture whether the session takes place.

Course grading: 1/2 lecture (based on 3 tests), 1/6 lab (based on the lab report and attendance), 1/6 calculations exercises (C1-C5, equal weight), 1/6 design exercise (based on the submitted design).

All classes will be held on campus. Lectures will be recorded, but parts of the lectures in which the blackboard is used may be not available. Participation in the exercises and tutorials is compulsory. Absence without good reason may lead to failing the course. Participation in the lectures is highly recommended, as large parts of the lectures may be interactive or related to solving problems / answering questions on the blackboard.

Please **follow MyCourses.aalto.fi** for the announcements and updates, as all the changes to the schedule will be communicated through the MyCourses system.