

Mon 25 Feb - Fri 05 Apr 2019 - Advanced soil mechanics L GEO-E2010

Week	Lectures: Mon & Wed (10:15 am) R2		Exercises and tutorials: Tue & Thu (10:15 am) Maari E, Maarintalo	
9	25.2	L1 Introduction / soil structure and microstructure	26.2 R9 (309)	Division of the laboratory work groups. Introduction, report. (ML,MJ) R9, Civil Engineering Department
9	27.2	L2 Real soil behaviour & advanced soil testing	28.2	Design exercise slope stability (HG, MJ)
9			1.3, 13-16	Laboratory exercise, group 1 , geotechnical laboratory 124 (ML)
10	4.3	L3 Mohr-Coulomb Model & Elastic models for soil	5.3	T1 Mohr Coulomb Model (WS, XL)
10			5.3, 9:15	T: Q&A before test 1 (WS)
10	6.3	Test 1 (L1-3) L4 Limit analysis	7.3	C1 Settlements 1 (HG, MJ)
10			8.3 13-16	Laboratory exercise, group 2 , geotechnical laboratory 124 (ML)
11	11.3	L5 Slope Stability	12.3	C2 Settlements 2 (HG, MJ)
11	13.3	L6 Earth pressures & retaining walls	14.3	C3 Sheet pile wall (HG, QAT)
12	18.3	L7 Water flow and seepage	19.3	C4 Water flow & seepage (WS, XL)
12			19.3, 9:15	T: Q&A before test 2 (WS)
12	20.3	Test 2 (L 4-7) L8 Introduction to Critical State soil Mechanics.	21.3	T2 Critical state soil modelling (WS, QAT)
13	25.3	L9 Modified Cam Clay Model	26.3	T3 Modified Cam Clay Model (WS, QAT)
13	27.3	L10 Material models for soils (Mirva Koskinen)	28.3	T4 Modified Cam Clay Model and SCLAY1 (WS, QAT)
13			1.4	Deadline for the return of the laboratory exercise (ML)
14	1.4	L11 Risk based design (Leena Korkiala-Tanttu)	2.4	T: Q&A before test 3. (WS, QAT) Soil –structure interaction (intro)
14	3.4	Test 3 (L 8-11) L12 Interaction between soil and structures	4.4	C5 Soil - structure interaction (WS, XL)
14			4.4	Excursion (12.00 until late)
14			5.4	Deadline for return of the design exercise (HG)

Grading: 1/2 lecture , 1/6 lab, 1/6 exercise (C1-C5), 1/6 design exercise.

Teachers: WS – Wojtek Sołowski, HG – Henry Gustavsson, ML – Monica Löfman, QAT – Quoc Anh Tran, MJ - Seyedmohammadjavad Seyedan, XL – Xiaoqin Lei.

L – lecture, C – calculation exercise, T – tutorial, TBD – to be decided