

GEO-E2080 Foundation Engineering and Ground Improvement (5 cr) in hybrid mode

Autumn 2022 2. Period – some changes are still possible

Prerequisites: GEO-E1020 Geotechnics

Lectures **Lectures will start on Mo 24.10.2022 at 14.15 in room 265 (R5)**
Lecturers: Prof. Leena Korkiala-Tanttu (LKT), Henry Gustavsson (HG),
Monica Löfman (ML)
Leena's room R148b, ph. 050 312 4775
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Exercises Exercises on Tuesdays **10.15-12.00** and Thursdays **14.15 – 16.00** room
Maari C-D
First exercise is on 1st November.
Attendance > 80 %
Exercises will be held by university teacher Henry Gustavsson (HG)
henry.gustavsson@aalto.fi

In this course you will learn about different foundation and ground improvement methods, and when and how they can be applied. You will also learn the basics of their design concepts. This course is useful for geotechnical, structural, rock and pavement engineers. The exam will be right after the course on Wednesday 7.12 9-12 as a lecture exam and another next Spring.. The weight of exercises / exam is 50% / 50%.

You need to attend the exercises. **You can be away once from the exercises.** All the exercises have to be returned. Exercises are mainly done during exercises hours, but you might need to do also something later on. There are both group and personal exercises. You will get feedback already during the course. Exercises are returned weekly. Only those who have returned all exercises can attend the exam (DL 7.12.2022). There might also be some additional homeworks. There will be more information of them during the course. The exercises are valid for one year (to the end of 2023). Some lectures are shared with the students from GEO-E1030 Structural Design of roads course (highlighted with green).

Course material consists mainly on hand-outs and they will be available in MyCourses. We will update only English lecture material. Finnish material and other additional material is delivered too. Feedback is collected though Webropol system. We will give you our counter-feedback in MyCourses.

NOTE: some changes are possible. Follow MyCourses pages.

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Timetable

(L lecture, E exercise), note the numbering of exercises is not continuous:

Week	Mo 14:15 - 16:00 R5 R002/265=R5	Tu 10:15 – 12:00 Maari C- D	We 12:15-14:00 R5 R002/265=R5	Th 14:15 – 16:00 Maari C-D
43 / 1	24.10. L1 Introduction of the course LKT Programming and analysis of ground investigations ML		26.10. L2: Geotechnical design and Excavations LKT	
44 / 2	31.10. L3 Stability ML	1.11. E3: Stability of a road embankment HG	2.11 L4; Excavations 2 LKT Geotechnical monitoring, SY	3.11. Geotekniikan päivä
45 / 3	7.11 L5; Vertical drainage and mass exchange ML	8.11 E1 Ground investigations and report (Part 1) HG	9.11 L6: Frost and frost protection HG	10.11 E4 Excavations, HG
46 / 4	14.11 L7: Deep stabilization ML	15.11 E5: Settlements of road embankment HG	16.11 L8: Drainage systems LKT	17.11 E6: Drainage and frost protection HG
47 / 5	21.11 L9: Piling 1, ML	22.11 E7: Piling HG	23.11 L10: Piling 2, LKT	24.11 Ground investigations and report (Part II) HG /JL
48 / 6	28.11 L11: Recycled and lightweight materials ML Shared with GEO-E1030		30.11 L12: Earth construction LKT Shared with GEO-E1030 Feedback of exercises and lectures	1.12 L13: Geosynthetic materials and their use, Pyry Piispanen Viacon NOTE ROOM R266
49 / 7	Lecture exam We 7.12. at 9-12 in R1			

LKT = Leena Korkiala-Tanttu

ML = Monica Löfman

HG = Henry Gustavsson;

JL = Jani Lepistö

SY = Sami Ylönen, Finmeas