Lyngby 2024-10-21

GEOLOGICAL SOIL DESCRIPTION

– The course in geology and soil classification

- How can you tell the difference between moraine and meltwater deposits?
- Is this clay, silt or sand?
- How can I tell if something is fill?
- The soil looks good here, but how can I be sure that nothing bad will come up from below?

Such questions often arise and require quick answers when you are on a construction site or working with soil in general – whether you are a site engineer or contractor, geotechnical or environmental project manager, or conducting supervision, inspections, or similar work.

Geo's geologists is once again offering courses in geology and soil classification after New Year's Eve. The course provides participants with a fundamental knowledge of what the various soil types look like. After a brief review of relevant geological theory, we will spend most of the time working with a varied collection of typical Danish soil samples, which we will describe with eyes and hands, following the guidelines in the Danish Geotechnical Society's Bulletin 1: "Guide to Engineering Geological Sample Description."

The course lasts one day, as described below. For the first time, we will hold the course in English, provided there are enough participants interested. The course fee, which includes teaching materials and lunch, is 5,400 DKK excluding VAT. For more information, contact the undersigned (phone: +45 3174 0573, email: nis@geo.dk). Registration via the attached form.

Course testimonials:
"Really good exercises, gave a good feel for the soil types," Niels Nørskov, Orbicon
"Great to get hands-on with the soil. Provides good insight and a better understanding for when you're out in the field yourself," Nicklas Kristiansen, COWI A/S

Kind regards
Geo
Nina Søager

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CVR-nr: 59787812

Geological Soil Description – *The course in geology and soil classification*

Background

In nature, there is a great variation in the appearance, composition, and mechanical and hydraulic properties of the soil, with gradual transitions from place to place. This is because a range of several different geological processes and mechanisms are behind the formation of the soil layers. However, there is a certain degree of order in these geological processes, so that each one creates soil layers that are more or less similar to each other.

When working with soil in connection with construction and civil engineering projects or environmental and groundwater investigations, it is very useful to be able to classify the soil into a limited number of main soil types based on certain easily recognizable or measurable characteristics.

The Danish Geotechnical Society's Bulletin 1: "Guide to Engineering Geological Sample Description" describes a classification system that, based on a simple and quick visual description of a soil sample's characteristics, possibly combined with simple classification tests, makes it possible to classify the sample as belonging to one of these soil types. In this way, we make a geological soil description.

The guide can be difficult to use if you do not possess a basic knowledge of what the various Danish soil types look like. The course aims to provide participants with this fundamental knowledge.

The Course

We begin with a brief overview of important geological processes and concepts, as well as the general characteristics of the resulting key soil types. Typical Danish soil types will be used as examples. We will discuss the use of geological maps and the significance of geological conditions for how field investigations are organized.

After this, the course will focus on practical exercises for the rest of the day with soil samples. Only by getting soil between your fingers can one learn to concretely relate to the different soil classifications and main soil types, such as clay, sand, gyttja, and peat, and learn the boundaries between the various soil types. The number of participants per course is limited to 16, to make sure the learning curve is meeting the standard.

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Time & Place: See Registration form.
Instructors: Geo, Lyngby: The geologists cand. scient. Ph.d. Nina Søager and cand. scient. Louise Anker
Geo, Brabrand: The geologist cand. scient. Ph.d. Nina Søager

Program

Time	Agenda item
8.30 - 9.30	Sedimentary processes The geology of Denmark The Limestone The rich clays and mica sand/clay Glaciers and glacial deposits
9.30 - 9.40	Break
9.40 - 10.45	Exercise 1. Grain size and grading Permafrost, dead ice, and dead ice holes Denmark during the Ice Age
10.45 - 10.00	Break
11.00 - 11.45	Exercise 2. Mean grain size A classic soil profile and fill
11.45 - 12.30	Lunch
12.30 - 15.30	Exercise 3. Description of soil samples from boreholes Exercise 4. ”Find five mistakes”
15.45 - 16.00	Evaluation and conclusion

Registration: Geological Soil Description

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(Please send the completed form to nis@geo.dk)

This season, we are holding the following courses, from 8.30 AM to 4:00 PM:

Thursday, January 16th 2025	At Geo, Maglebjergvej 1, 2800 Kgs. Lyngby

The price per participant is 5.400 DKK, excluding VAT. The amount includes course materials and lunch, and have to be paid before the course date. If 10 or fewer participants register for a course, we reserve the right to cancel or refer to another course date. Tick the box if an English-language course is desired.

Course date		Name	Position	E-mail	English
16/1					
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☐					☐
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Company and CVR-number:
Adress:
Zipcode and city:
Phone number:
Contact person:
E-mail:
N/A EAN-number.:

Date: _____ Signature: _____