Problematic Soils

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Module number	Credits	Workload	Semester[s]	Duration	Group size
SE-O-18	3 CP	90 h	3. Sem.	1 Semester[s]	no limitation

Courses	Contact hours	Self-study	Frequency
a) Problematic Soils	a) 2 WLH (30 h)	a) 60 h	a) each winter

Module coordinator and lecturer(s)

Prof. Dr.-Ing. Torsten Wichtmann

a) Dr.-Ing. Wiebke Baille

Admission requirements

Learning outcome, core skills

After successfully completing the modules, the students are able to

- assess unsaturated soil behaviour, special soil mechanical properties, phenomena, and the behavior of problematic soils,
- can design an appropriate experimental program (laboratory / field tests) for an investigation of problematic soils,
- assess difficult ground conditions and develop solutions for these situations.

Contents

a)

The course deals firstly with the basics of unsaturated soil behaviour, and further with different phenomena, that can cause difficulties in civil works for some types of soils:

- Unsaturated soil behaviour
- Swelling and shrinkage behaviour
- Physico-chemical effects in clays
- Structure and fabric, compacted soils
- Collapsible soils
- Soft plastic and organic soils
- Experimental methods for investigations on these soils and phenomena

Educational form / Language

a) Lecture with tutorial / English

Examination methods

• Written exam 'Problematic Soils' (180 min., Part of modul grade 100 %)

Requirements for the award of credit points

- Passed final written examination

Module applicability

- M.Sc. Subsurface Engieering

Weight of the mark for the final score

Percentage of total grade [%] = 3 * 100 * FAK / DIV

FAK: The weighting factors can be taken from the table of contents.

DIV: The values can be taken from the table of contents.

Further Information