

ME-705

Experimental Geomechanics

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Cursus	Sem.	Type
Mechanics		Obl.

Language of teaching	English
Credits	1
Session	
Exam	Oral presentation
Workload	30h
Hours	14
Courses	10
TP	4
Number of positions	

Frequency

Every 2 years

Remark

Next time: Spring 2020

Summary

The aim of the course is to provide the students with a detailed description of the modern experimental techniques for testing geomaterials. Techniques and apparatuses are presented to test materials under a variety of situations, including non-isothermal and partially-saturated conditions

Content

1. Introduction
2. Fundamentals of data acquisition
3. Microstructural investigation of porous materials
4. Testing geomaterials in partially saturated conditions
 - 4.1 An insight into the "suction" concept
 - 4.2 Experimental methods to measure suction
 - 4.3 Techniques for suction control (liquid and vapour transfer)
 - 4.4 Assessment of volume change
 - 4.5 Hydro-Mechanical apparatuses
5. Non iso-thermal testing of geomaterials
 - 5.1 Techniques for temperature measurement and control
 - 5.2 Effects of temperature on measurements
 - 5.3 Thermo-Hydro-Mechanical testing facilities
6. Selected topics