

ME-705

Experimental Geomechanics

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Cursus	Sem.	Type
Mechanics		Opt.

Language of teaching	English
Credits	1
Session	
Exam	Oral presentation
Workload	30h
Hours	14
Lecture	10
Practical work	4
Number of positions	

Frequency

Every 2 years

Remark

Next time : Fall 2023

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. Recall on mechanical testing (advanced triaxial testing)
4. Multiphase testing of geomaterials
 - 4.1 Experimental methods for partially saturated soils
 - 4.2 Techniques for suction measurement and control (liquid and vapour transfer)
 - 4.3 Gas testing
 - 4.4 Hydro-Mechanical apparatuses
5. Multiphysical testing of geomaterials
 - 5.1 Testing geomaterials in non-isothermal conditions
 - 5.2 Thermo-Hydro-Mechanical testing facilities
 - 5.3 Chemo-mechanical testing
6. Pore-scale investigation of porous materials