

ME-705 **Experimental Geomechanics**

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<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
Mechanics		Obl.

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

**Frequency**

Every 2 years

**Remark**

Next time: Fall 2019

**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