## 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