



MÉCANIQUE DES SOLS

SOIL MECHANICS

Lecturers: **Eric VINCENS, Francesco FROIIO**

| Lecturers : 14.0 | TC : 14.0 | PW : 0.0 | Autonomy : 4.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

This module aims to lay the essential background of Fundamental Soil Mechanics essential to geotechnician to understand and predict the behavior of a complex multiphase (air, water, solid) material : soil. It makes the link with Solid Mechanics (UE MSS), of which he shows a concrete application. It is notably intended for future students of the Ecological Transition & Territories option.

Keywords : sand, clay, hydraulic, shear, consolidation, limit analysis, support

Programme

- 1 - Physical characteristics and classification of soils.
- 2 - Soil hydraulics
- 3 - Consolidation of fine soils
 - 3.1 - Oedometric test
 - 3.2 - Consolidation settlements
- 4 - Resistance of soils to shearing
 - 4.1 - Shear tests
 - 4.2 - Stress paths
- 5 - Limit analysis - thrust and earth stop

Learning outcomes

- know how to calculate - the physical and mechanical properties of soils - soil settlements due to the presence of a structure on the site - hydraulic flows and under-pressures under structures - a stress field in a soil

Independent study

Objectifs :

Méthodes :

Core texts

Assessment

know-how score: 10min MCQs at the start of the session in continuous assessment
knowledge score: final test with part "with documents" and other "without document"