

# UE Basic geomechanics



Niveau d'étude  
Bac +4



ECTS  
3 crédits



Composante  
UFR PhITEM  
(physique,  
ingénierie, terre,  
environnement,  
mécanique)



Période de  
l'année  
Toute l'année

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX7MEAK / PAX8MEAD / PAX9CEAC

## Présentation

### Description

The course provides the students with the basic concepts of geomechanics, that is the theoretical and applied science dealing with the mechanical behavior of geomaterials (soil and rock).

### Objectifs

#### Teaching program:

The first part of the course covers the basic subjects of geomechanics such as stress and strain, permeability and consolidation, compressibility, shear strength, testing techniques, etc. The course then focuses on the mechanical behaviour of geomaterials and provides a basic understanding of the features that are specific to geomaterials (dilatancy, friction, pressure dependence) and the modelling of such complex phenomena. In particular, an introduction is given to the ideas and concepts of elastoplasticity, this subject being of critical importance to geomechanics and geotechnical engineering.

### Heures d'enseignement

UE Basic geomechanics - CMTD

Cours magistral - Travaux dirigés

20h

---

## Pré-requis recommandés

continuum mechanics

**Période** : Semestre 8

## Infos pratiques

---

### Lieu(x) ville

› Grenoble

---

### Campus

› Grenoble - Domaine universitaire