UE Basic geomechanics

Level
Baccalaureate +4

ECTS
3 credits

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

Semester
Tous les ans

- **Teaching language(s):** English
- **Open to exchange students:** Yes
- **Code d'export Apogée:** PAX7MEAK / PAX8MEAD

Presentation

Description

The course aims to provide 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). 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.

Objectives

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to provide the students with the basic concepts of geomechanics

Course program:

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Course parts

UE Basic geomechanics - CMTD	Lectures (CM) & Teaching Unit (UE)	20h

Recommended prerequisites

continuum mechanics

Useful info

Place

Grenoble

Campus

Grenoble - University campus