UE Plastic analysis of structures

ECTS
3 credits

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

Semester
Automne

- **Teaching language(s):** English
- **Open to exchange students:** Yes
- **Code d'export Apogée:** PAX7MEAO / PAX8MEAO / PAX9CEAR

Presentation

Description

The modelling of mechanical properties of materials and structures is a complex subject. In some applications, it is sufficient to assume that the material remains elastic. However, such a simplified assumption is appropriate only within a limited range, and in general must be replaced by a more realistic approach that considers the inelastic processes such as plastic yielding. The course aims to provide the students with the basic concepts of plastic analysis of structures: limit analysis, multiaxial stress-strain relations, limit state theorems, concept of plastic hinges and yield line of plates, calculation of collapse load and displacement at incipient collapse, application to engineering materials.

Course parts

UE Plastic analysis of structures - CMTD	Lectures (CM) & Teaching Unit (UE)	20h

Useful info

Campus

- Grenoble - University campus