


# 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