

# UE Plastic analysis of structures



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:** PAX7MEAO / PAX8MEAO / PAX9CEAR

## Présentation

### 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.

### Heures d'enseignement

UE Plastic analysis of structures - CMTD

Cours magistral - Travaux dirigés

20h

**Période :** Semestre 7

## Infos pratiques

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## Lieu(x) ville

› Grenoble

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## Campus

› Grenoble - Domaine universitaire