

UE Plastic analysis of structures



Niveau d'étude
Bac +4



ECTS
3 crédits



Composante
UFR Physique,
Ingénierie,
Terre,
Environnement,
Mécanique
(PhITEM)



Période de
l'année
Automne (sept.
à dec./janv.)

Diplômes intégrant cet élément

- Master Génie civil

- › 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

CMTD

Cours magistral - Travaux dirigés

20h

Période : Semestre 7

Infos pratiques

Lieu(x) ville

➤ Grenoble

Campus

➤ Grenoble - Domaine universitaire