


# UE Dynamics of structures

 ECTS  
3 crédits

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

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

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX9CEAN

## Présentation

### Description

The scope of this course is to introduce students into the importance of dynamic loading and to familiarize them with the different techniques used for the dynamic modeling and analysis of structures.

The beginning of the course concentrates on the study of wave propagation phenomena in elastic solids (essentially one dimensional progressive plane waves). Emphasis is placed on the split Hopkinson pressure bar experiment.

The second part of the course focuses on direct numerical integration methods applicable to linear and nonlinear systems.

The last part of the course concentrates on the study of multiple#degree#of#freedom linear systems and the calculation of their response by modal superposition.

### Heures d'enseignement

UE Dynamics of structures - CM

CM

26h

**Période :** Semestre 9

# Infos pratiques

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## Lieu(x) ville

› Grenoble

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## Campus

› Grenoble - Domaine universitaire