

CIVIL-422

Advanced continuum mechanics

Molinari Jean-François

Cursus	Sem.	Type
Civil Engineering	MA1, MA3	Opt.
Computational science and Engineering	MA1, MA3	Opt.

Language of teaching	English
Credits	3
Withdrawal Session	Unauthorized Winter
Semester	Fall
Exam	Oral
Workload	90h
Weeks	14
Hours	3 weekly
Courses	2 weekly
Exercises	1 weekly
Number of positions	15

It is not allowed to withdraw from this subject after the registration deadline.

Remark

pas donné en 2019-20 -This is an advanced continuum mechanics class, taught in an inverted class. A small group of students (max. 15) will read class material at home and come with questions to class

Summary

Reading class of classic text book of Lawrence Malvern "Introduction to the Mechanics of a Continuous Medium". A special emphasis will be put on advanced topics, including finite kinematics, and non-linear material behavior. Applications will cover both solids and structures fluid mechanics.

Content

The whole book of Malvern will be covered

Learning Prerequisites**Required courses**

Introduction to continuum mechanics

Teaching methods

Inverted class
Class discussion

Expected student activities

Reading of a textbook. Solve weekly exercises

Assessment methods

Oral exam :
30 min of preparation for two exercises and discussion of these exercises on board for 30 min.

Resources**Bibliography**

Lawrence Malvern, "Introduction to the mechanics of a continuum medium".

Ressources en bibliothèque

- [Lawrence Malvern, "Introduction to the mechanics of a continuum medium"](#)

Moodle Link

- [http://To be announced](#)