CIVIL-527

Selected topics in mechanics of solids and structures

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Cursus	Sem.	Type
Civil Engineering	MA1, MA3	Opt.
Mechanics		Opt.

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

Remark

cours biennal donné une année sur deux

Summary

The class covers the fundamentals of wave dynamics and fracture mechanics. The aim is to deepen their knowledge in advanced topis in mechanics of solids and structures and discuss current research topics. Case studies on catastrophic failure will be presented and discussed in class.

Content

- Wave dynamics
- Introduction to mechanics of rupture

Learning Prerequisites

Recommended courses

Statics (for GC), Continuum Solid Mechanics (for GC), Structural Mechanics I

Learning Outcomes

By the end of the course, the student must be able to:

- To reinforce the general culture in mechanics of solids and structures of the future engineer by highlighting fundamentals.
- To study some advanced topics in recent or fondamental fields of structural and continuum mechanics.
- To understand and model the behaviour of materials under extreme loading conditions.

Teaching methods

Ex cathedra, in depth exercices, case studies

Assessment methods

Oral exam