

CIVIL-527 Selected topics in mechanics of solids and structures

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Cursus	Sem.	Туре	Language of	English
Civil Engineering	MA1, MA3	Opt.	teaching	Linglish
Mechanics		Opt.	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