

Fatigue

Course code: AFA3

ECTS Credits: 1

Department	: MSISI	Lectures	: 07h30
Lecturers	: G. Hénaff	Tutorials	: 07h30
Year of study	: 2 nd year	Laboratory sessions	:
Semester	: 3 rd semester	Project	:
Assessment method(s)	: 1 written test	Home works	:
Language of instruction	: English	Total hours	: 15h00
Type of courses	: Compulsory		

Objective: Take into account a stress concentrator or a crack during dimensioning of a structure under static or cyclic loading

Prerequisites: Solid mechanics

Content:

1. Fatigue damage (crack initiation, crack propagation)
2. Cyclic stress strain behaviour – Low cycle fatigue
3. High cycle fatigue
4. Fatigue of notched components
5. Fatigue crack growth

Recommended reading: D. François, A. Pineau, A. Zaoui, *Comportement mécanique des matériaux*, Hermes, 1995

