

Mathematics for acoustics 1

Course information

ECTS: 3	Common with the master in Acoustics	Course code :
Lecture: 15h	Tutorial classes: 15h	Practical work: none

Course coordinator : Olivier Dazel

Course Description

Aim

The aim of this course is to present mathematical notions for the resolution of acoustical problems and signal processing. It is divided in lectures and exercises.

Prerequisite

[Mathematics refresh](#)

Contents

- * Projection techniques on orthogonal bases.
- * Advanced matrix operations (Projections, LU, QR, Householder, Decomposition in Singular Values).
- * Practical applications of the Hilbertian theory
- * Approximation by least mean square polynomial or with exponential.
- * Solving a given physical problem through adapted development (orthogonal polynomials).

Examination duration

2 hours

Examination type

Written examination