

## **UE Waves Physics**

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ECTS 3 cred

ECTS 3 credits Component UFR PhITEM (physique, ingénierie, terre, environnement, mécanique) Semester Automne

- > Teaching language(s): English
- > Open to exchange students: Yes
- > Code d'export Apogée: PAX7GEAB

## Presentation

## Description

The wave physics course aims to provide students with the theoretical knowledge necessary to study wave propagation for geophysics. The course covers the following concepts

- Propagation of acoustic waves in fluids, in infinite and bounded media (guided waves)
- Green's functions in fluids
- Propagation of elastic waves in solids
- Laws of refraction, Huygens' principle, Khirkchoff's theory of diffraction
- Rayleigh, Love, Lamb, Scholte, Stoneley waves

The course is illustrated by practical work allowing the application of these concepts:

- Measurement and inversion of Lamb wave propagation
- Standing waves in a Kundt's tube
- Ultrasonic imaging





## Course parts

UE Waves Physics - TD	Tutorials (TD)	6h
UE Waves Physics - CM/TD	Lectures (CM) & Teaching Unit (UE)	12h
UE Waves Physics - TP	Practical work (TP)	9h
Useful info		

Campus

> Grenoble - University campus