


UE Project in engineering seismology [seismic vulnerability, site characterization, ground motion simulation]

 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:** PAX8RSAB

Presentation

Description

This unit aims to learn the most recent methods used to assess ground motion caused by earthquakes, characterize shallow structures for seismic response analysis, or assess seismic hazard, seismic vulnerability and seismic risk in urban areas. The unit is organized in the form of a project to develop one of the abovementioned topics. The basic notions are first introduced in the "Engineering Seismology" lectures (wave propagation, fault rupture mechanisms, empirical and numerical ground motion prediction, non-invasive methods for characterizing shallow ground structure, ground-motion parameters used in earthquake engineering, structural dynamics applied to seismology, seismic vulnerability, structural health monitoring).

Course parts

UE Project in engineering seismology - CM/TD	Lectures (CM) & Teaching Unit (UE)	21h
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Recommended prerequisites

This project relies on solid knowledge in Seismology and Seismic Risk. It is strongly recommended to previously follow the unit “Engineering Seismology”.

Useful info

Campus

› [Grenoble - University campus](#)