UE Introduction to Seismic Risk

ECTS
6 credits

Component
UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)

Semester
Printemps

- **Teaching language(s):** French
- **Open to exchange students:** Yes
- **Code d'export Apogée:** PAX8RSAA

Presentation

Description

The "Introduction to Seismic Risk" module introduces the basic concepts for assessing seismic hazard and risk assessement, and presents the main scientific issues and methods, from the movement of tectonic plates and faults rupturing to surface ground motions and their accounting for in seismic regulations. This module will address the concepts of active deformation, slip velocity and fault loading, earthquakes occurrence, seismic rupture characteristics, wave propagation in the earth's crust and modification of ground motions by surface geology. The module will also cover all the statistical methods necessary for the quantification of seismic hazard and risk (quantification of uncertainties, distribution laws, random processes, etc.). Introduction of these basic concepts are essential to the M2 Active Faults and M2 Engineering seismology modules which are more advanced courses.

Course parts

UE Introduction au risque sismique - CM/TD	Lectures (CM) & Teaching Unit (UE)	48h

Recommended prerequisites

Basics of seismology

Useful info

Campus

- Grenoble - University campus