

Seismic cycle: from earthquakes to deformation



Niveau d'étude
Master 2



ECTS
3 crédits



Volume horaire
24h



Période de
l'année
Semestre 3

Présentation

DESCRIPTION

This class presents tools and concepts to address earthquake cycle at different time scales, from the earthquake to the cumulative deformation along active faults. The class is divided into an on-land part and a off-shore part, as approaches are quite different, although the final target is similar.

During this class (including several hand-on sessions) we discuss the different models of earthquake cycle found in the literature and we explore how different tools (geodesy, seismology, photo-mapping, paleoseismology...) that can be combined to test these models.

OBJECTIFS

At the end of this class, the target is that the students get a good sense of the scaling of earthquake-related deformation and how this deformation accumulates to build landscape. We also aim at a good understanding of the interaction between earthquake rupture (start, end, propagation...) and active fault geometry.

During hand-on session we test different technics classically used in active fault studies to give the students a better sense of the advantage and limitation of such methods, in order for them to build a critical capacity.

HEURES D'ENSEIGNEMENT

Seismic cycle: from earthquakes to deformation	Cours Magistral	12h
Seismic cycle: from earthquakes to deformation	Travaux Dirigés	12h

PRÉ-REQUIS NÉCESSAIRES

The class is taught in english.

The class has no specific requirement

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