UE Fieldtrip Mountain Building, Climate, and biodiversity

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:** PAX9SRAJ

Presentation

Description

In this field course we will study the impact of geodynamics and climate on the development of biodiversity. The creation of mountain belts and sedimentary basins via geodynamic processes leads to changes in the environment at the earth's surface particularly along active plate boundaries. Organisms living in these environments adapt to these changes through evolution and migration. Phylogenetic studies as well as the fossil record show that evolution occurs at a timescale comparable to the timescale of geological processes. Surface renewal through geodynamic processes also significantly impacts on the interconnectedness of environmental niches, which means it can stimulate the isolation of populations or trigger sudden mixing between populations that were formerly disconnected. The climate also impacts on the physical parameters of environments at the earth's surface and changes in climate can thus equally stimulate evolutionary adaptations, trigger extinctions or enhance the radiation of certain taxa better adapted to the environments new conditions. In this field course we will use a case-study from the Africa-Eurasia collision zone to study how geodynamics and climate can drive speciation, migration and extinction of living organisms and hence impact biodiversity. We will use field observations as well as analytical data to lay the link between processes acting in the interior of the earth, those acting in the earth's external envelopes and the biosphere. The course will be graded through a written field report. It is generally taught in English

Course parts

UE Fieldtrip Mountain Building, Climate, and biodiversity - Terrain	Terrain	30h

Useful info

Campus

- Grenoble - University campus