

Physics of natural and contaminated sites

 Niveau d'étude Master 2	 ECTS 3 crédits	 Volume horaire 26h	 Période de l'année Semestre 3
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Présentation

DESCRIPTION

The natural places around us offer many scientific questions. What is happening in front of us? What will happen after a perturbation? While these questions are generally considered to be applied problems, e.g. related to economic resources or polluted sites, the underlying problems and the understanding of the processes taking place are fundamental and delicate questions, and to be able to provide tentative answers it is necessary to mobilise the latest concepts and the most sophisticated technologies. The aim of this course is to introduce some of the concepts and methods used to address the physics of natural sites. Lectures will cover heuristic methods from applied geophysics, environmental geochemistry and fluid mechanics. Experimental methods will include methods for characterising and monitoring active faults, active volcanoes, hydrothermal systems and their application to industrial and environmental problems. The course consists of 9 units, 8 units of lectures and practical sessions including exercises and experiments, and the final unit for student presentations.

OBJECTIFS

The aim of this module is to introduce some of the concepts and methods used to address the physics of natural sites. Lectures will cover heuristic methods from applied geophysics, environmental geochemistry and fluid mechanics as applied in IPGP in the Physics of Natural Sites team. Lectures will be linked to other Masters courses (seismology, geochemistry, water chemistry, remote sensing) and to research carried out in IPGP. Experimental methods will include characterisation and monitoring of active faults, active volcanoes, hydrothermal systems and their application to industrial and environmental problems.

HEURES D'ENSEIGNEMENT

Physics of natural and contaminated sites	Cours Magistral	21h
Physics of natural and contaminated sites		5h

PRÉ-REQUIS OBLIGATOIRES

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