Volcanic systems 2

Niveau d'étude
Master 2

ECTS
3 crédits

Volume horaire
24h

Période de l'année
Semestre 3

Présentation

DESCRIPTION

This course offers a comprehensive overview of modern volcanology. A broad range of topics will be presented, including magma generation and transfer processes, magma properties, and their influence on volcanic eruptive styles. The structure of volcanic plumbing systems will be examined, along with their connections to the petrology and geochemistry of volcanic rocks and minerals. Magmatic, phreato-magmatic and phreatic eruptions will be studied, as well as the evolution of volcanic edifices over time through phases of construction and destruction. Volcanic hazards and risks will be analyzed through case studies of recent eruptions, providing real-world context. Additionally, the course will introduce the impact of explosive eruptions on climate and atmospheric composition.

The course comprises 14 hours of lectures and 10 hours of tutorials, where case studies of eruptions will be discussed. These tutorial sessions will be dedicated to the preparation and presentation of posters based on selected articles.

OBJECTIFS

Following this course, students will be able to:

- Utilize fundamental concepts in volcanology, petrology, and magmatic geochemistry.

- Connect volcanological knowledge with social sciences to assess the impact of volcanic eruptions on society.

- Utilize scientific literature, analyze it critically, and synthesize information.

- Prepare a poster, working in a team, to present a scientific topic.

HEURES D'ENSEIGNEMENT

Volcanic systems	Cours Magistral	14h
Volcanic systems	Travaux Dirigés	10h

PRÉ-REQUIS NÉCESSAIRES

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