Volcanology

Earth Sciences 421

Section: D100

Term: 2006 Fall

Instructor: Dr. Glyn Williams-Jones

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Discussion Topics: General:

This course is designed to give students an introduction to physical and chemical volcanology through a comprehensive examination of volcanic eruptions and their consequences. The main topics covered are the rheological properties of magmas and lavas, structure of volcanic landforms, eruption dynamics, monitoring and hazard assessment, the emplacement of volcanic deposits, extraterrestrial volcanism and the effects of eruptions on the environment.

Course Topics:

- Properties of magmas and lavas
- Volcanic eruption dynamics
- Structure of volcanic landforms
- Types of volcanic deposits and emplacement mechanisms
- The hazards, monitoring techniques and mitigation of volcanic events
- Extraterrestrial volcanism and environmental effects of large eruptions

Course Organisation:

One 2-hour lecture and 3-hour lab per week.

Mon. 9:30-11:20 (lec) & 13:30-16:20 (lab).

Grading: 1. Lab assignments 10%

2. Term project 30%

3. Mid-term exam 25%

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4. Final Exam 35% (exam is comprehensive)

Required Texts: "Encyclopedia of Volcanoes" by Sigurdsson et al. (Academic Press, 2000, ISBN 0-12-643140-X)

Recommended Texts: None.

Materials/Supplies: None.

Prerequisite/Corequisite: EASC 205, 207 and 208

Notes: Only SFU emails will be answered!