

STT-Fire/Water/Ice-Geology of Vancouver

Earth Sciences 100

Section: D100

Term: 2005 Spring

Instructor: Dr. John J. Clague

Discussion Topics: This field-oriented course provides an in-depth summary of the geology of the Vancouver metropolitan area. Fundamental geological principles and ideas are taught through the rocks, landforms, and natural processes of the Vancouver area. Major objectives of the course are to familiarize students with the geology of their \204home place\211 and to show them the relevance of geology to society.

The course includes five field trips to sites of local geologic interest. The field trips are closely linked to lectures and laboratory exercises, which provide students with basic knowledge required to understand what they see outdoors.

Field trips and related course content include the following: Caulfeild Park (geologic time, plutonic and metamorphic rocks, metamorphism and petrogenesis, plate tectonics); Stanley Park (sedimentary rocks, lithostratigraphy, biostratigraphy, the fossil record and evolution); Point Grey (stratigraphy, sediments, sedimentology, erosion, glaciation, sea-level change, ground water); Sea-to-Sky Highway (climate and climate change, volcanoes, landslides, earth resources); Fraser River and delta (deltaic and river environments, floods, earthquakes, geology and society).

The course comprises two-hour lectures alternating weekly with five-hour field trips. Field trips will take place on Thursday afternoons in the spring term. DO NOT schedule any other course on Thursday afternoons.

Grading: Course marks will be based on a field trip report (30%), a term paper (30%), and a final examination (40%). Students wishing to take another first-year Earth Science course or any second-year Earth Sciences course must receive an A or B in the course.

Term paper: Each student will research and write a short term paper on some aspect of the geology of their home town to be decided in consultation with the instructor.

Final examination: Four to ten short essay questions; two hours; closed book; based on all course materials including field trips.

Required Texts: Vancouver, City on the Edge; Living with a Dynamic Geological Landscape. Authors John Clague and Bob Turner. Publisher: Tricouni Press, Vancouver.

Recommended Texts: None.

Materials/Supplies: None.

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Prerequisite/Corequisite: None.

Notes: Vancouver geology web material to be made available by instructor.

Questions?

Contact John Clague, ASB 9701, 291-4924, jclague@sfu.ca

*Notes: You should budget \$50 for all field trip expenses. Be prepared for cool wet weather. You will need a daypack, field boots, a 35-mm camera, a field notebook, pens, and pencils.

This outline is derived from a course outline repository database that was maintained by SFU Student Services and the University's IT Services Department. The database was retired in 2014 and the data migrated to SFU Archives in 2015.