

Quaternary Geology

Earth Sciences 403

Section: D100

Term: 2012 Spring

Instructor: Dr. John Clague

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Discussion Topics: General:

This course provides an in-depth examination of Quaternary geology (i.e., the geology of the past 2.6 million years). Topics include Quaternary processes and sediments; stratigraphy, geomorphology, surficial geology, natural hazards, and Quaternary geochronology. The emphasis is on developing an understanding of (1) the recent geologic record in four dimensions (time being the fourth dimension), (2) important natural processes that have shaped the landscape during the Quaternary and (3) Quaternary sediments and landforms. Principles and concepts are illustrated with examples from Western Canada and the adjacent northwestern U.S. The course has a strong field emphasis within the constraints imposed by winter weather.

Course Organization:

There will be a 2-hour lecture each Friday. I may also lecture in at least a portion of the lab period. On many Fridays, however, *field trips* will replace the lecture. DO NOT schedule any other courses on Friday. In addition to Friday field trips, we will have a 3-day excursion to the Channeled Scablands in central Washington in March or beginning of April.

Grading: Attendance in class and on field trips 10%
Oral Presentation 20%

Mid-Term Examination 30%

Final Examination 40%

Required Texts: None. Assigned readings: A collection of research papers will be distributed during the class. The articles provide information on the Quaternary geology of British Columbia; some articles are pertinent to the field trips.

Recommended Texts: Glacial Geology; Ice Sheets and Landforms. Bennet, M.R. and Glasser, N.F. 1996. John Wiley and Sons

Materials/Supplies: None.

Prerequisite/Corequisite: EASC 201 and GEOG 213
Recommended: EASC 303 and GEOG 313

Notes: **You should budget \$100.00 for all field trip expenses, As we will be in the field a minimum of 8 days in late winter/early spring, be prepared for cool wet weather. You will need a backpack, field boots, a trowel, a camera, and standard items including a field notebook, pen, and pencils.

Be aware that during the field trip there will be periods of strenuous hiking, hiking close to cliffs and crossing roads with busy traffic. Appropriate clothing and footwear should be worn. Further details regarding safety, food, housing and field supplies will be discussed prior to the field trip.

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There will be a supplementary fee of \$80.00.

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