

GEOS120: Part B Glaciers

Lectures 11.30 – 1:00 pm, 02/22/07 through 04/03/07

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Recommended text:

Hambrey, M. and J. Alean (2004): *Glaciers*. Cambridge University Press. Cambridge, 375 pp.

Post and Chapelle (2000): *Glacier ice*, University of Washington Press, 145 pp.

Homepage: www.swisseduc.ch

Grading criteria:

Quizzes (Thursdays) 15%

Final exam (3 April): 50%

Labs*: 35%

Attendance of labs is mandatory. Lab exercises are to be completed and handed in by the end of each lab session.

Course outline

1. Introduction and overview

- What is a glacier ? Where do you find them ? Why do we study them?

2. How does a glacier work ?

- Glacier landscapes
- Snow, firn and ice, mass balance
- Ice crystals, flow of a glacier
- Glacier hydrology

3. Ice ages and climate, past & future glacier variations

- Glaciation and the ice ages
- Recent glacier variations and future projections
- Ice cores as an archive of past climate