

Guidance

理論雪氷学特論

Advanced Course in Theoretical Glaciology

- Time: 14:45-16:15 (4th period) on Thursdays
(15 lectures between Oct. 8, 2020 and Feb. 4, 2021)
- Place: Online via Zoom
- Instructor: Ralf GREVE (グレーベラルフ)
greve @ lowtem.hokuadi.ac.jp
- Topic: To study the flow and evolution of ice sheets, ice shelves and glaciers within the Earth system.

Contents

1. Introduction
2. Elements of continuum mechanics
3. Constitutive equations for polycrystalline ice
4. Large-scale dynamics of ice sheets
5. Dynamics of glacier flow
6. Large-scale dynamics of ice shelves
7. Glacial isostasy

Prerequisites

Some level of comfort in calculus and linear algebra.

Reasonable skills in oral and written English
(which is the course language).

Homework

Repetition of the material of the last lecture.

Preparation of the material of the next lecture.



Grading

Performance in class (discussion, questions) 50%.

Multiple-choice quizzes 50%

→ repetition in the beginning of every lecture,
starting next week (Oct. 15).

Course materials

Lecture notes

“Advanced Course in Theoretical Glaciology”

available as PDF at

<http://www.ice.lowtem.hokudai.ac.jp/~greve/>

(reload browser, scroll down for “Classes”).

Further materials

These slides, Zoom access data etc. → above website.

Questions ?