

Course Syllabus for PHYS F472E (1 credit)

Advanced Topics: Glacier Physics

Instructor: Martin Truffer, truffer@gi.alaska.edu

Course Website: <http://www.gi.alaska.edu/~truffer/glacierphysics>

Prerequisites: PHYS F220; PHYS F301; or permission of instructor.

Meeting times: **Class:** 1:00 – 2:00 PM, Monday, Wednesday, Friday
Last regular class: Friday, 18 February

Materials Needed:

Required Text *There are no text requirements. Some manuscript notes will be provided.*

Content:

This short course (13 lectures plus final) will provide an overview of the physics of glaciers. It is aimed at advanced undergraduate or beginning graduate students in physics and geophysics. In the course we will treat the deformation of ice, motion over the underlying substrate, water flow through the ice matrix, and glacier-climate interaction.

Course Goals:

- 1) Gain an overview of the field of glacier physics that can form the basis for more detailed courses graduate level courses.
- 2) Gain an understanding of how basic physical principles are applied to geophysical situations.

Lectures:

Lectures will mostly be delivered on the blackboard. The material covered will be distributed in a manuscript, but it is important to keep your own notes. The manuscript is intended as a guide to help you through the course.

Homework:

There will be one homework assignment per week. The assignment will be handed out (and posted on the web) on Wednesdays and will be due on the following Wednesday by beginning of class (1 pm). You are encouraged to work with others on the homework, but

make sure the paper you turn in is not simply copied from someone else. These assignments help me assess your understanding of the material, and will count toward your final grade. **Late problem sets will generally not be accepted.** Solutions will be distributed in class. You are **strongly** encouraged to look at these solutions to help you understand how to approach these problems; it will also help for the final.

Final Exam:

The final exam will be at **1:00 PM – 2:00 PM, Monday, February 21.**

Grading:

The course grade will consist of the following components:

Final exam	40 %
Homework	60 %

Your final grade will depend on your overall percentage score (A: 90-100%, B: 80-90%, C: 70-80%, D: 60-70%, F: 0-60%). I will use attendance and course participation to round your grade up or down.

Contacting Me:

I have office hours 2:00 - 3:30 Monday (Rm 116 NSB, phone number 6107). At other times I'm in my office at the Geophysical Institute: Rm 401D; phone number: 474 5359. My home number is 479 7545. Please only call there if absolutely necessary. You can contact me anytime. I encourage to call or email first to make sure I'm in my office. I will also meet you in the Reichhard building outside office hours by appointment.

Complaints and Concerns:

You are always welcome to talk to me about anything, however, if you have a non-subject matter question or concern that cannot be resolved by me contact the department chair, Dr. Chowdhury, Physics Department Office, room 102 NSB.

Students with disabilities:

I will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities.