

Please enter your name on top of each page you submit

- A. What was the motivation for your joining the course in alpine glaciology?
How does the material of this course relate to what you are doing presently?
- B. Write one page on any topic of your choice that was discussed or observed this week.
- C. Select four of the following seven topics and give a concise summary of one or two pages:
1. Glacier morphology, glacially formed landscape, topographic influence on alpine glaciers.
 2. Energy balance of snow and ice, components, units, relative importance in winter and in summer.
 3. Mass balance. Contributions to accumulation and ablation, methods of mass balance determination, definition of equilibrium line altitude, accumulation area ratio, specific balance and its units.
 4. Ice dynamics. Deformation and sliding velocity, interrelation of velocity, ice thickness and slope, surges.
 5. Rock glaciers. Explain ice covered and talus derived rock glaciers, describe the rock glacier we visited in terms of morphology, velocity, thickness, water temperature.
 6. Remote sensing. Explain the physical principles of ground penetrating radar measurements and of laser scanning of glacier surfaces. How can these methods be applied to glaciological problems?
 7. Little ice age. Climatic history of the past 1000 years, glacier advances since 1600, surges of Vernagt Ferner.
- D. **Briefly** answer the following questions:
8. Why and where do crevasses form, what is a shear line.
 9. Why do glaciers melt from below.
 10. How is ice flow connected to mass balance in a stationary glacier.
 11. Why is the conductivity of rock glacier melt water higher than that of water discharged from an ordinary ice glacier.
 12. Give typical figures for the annual mass balance and motion of alpine glaciers.
 13. Is ground penetrating radar or laser scanning better for determining mass balance.
 14. How can you date the age of moraines or sediments.
 15. What is stored in a glacier inventory.
 16. Name the terms of the water balance.

Good luck!

