

# Syllabus

for course at advanced level

**Permafrost - Interactions with Ecosystems and Hydrology**  
**Permafrost - påverkan på ekosystem och hydrologi**

**7.5 Higher Education  
Credits**  
**7.5 ECTS credits**

<b>Course code:</b>	GE7051
<b>Valid from:</b>	Autumn 2015
<b>Date of approval:</b>	2012-08-27
<b>Changed:</b>	2015-03-02
<b>Department</b>	Department of Physical Geography
<b>Main field:</b>	Physical Geography and Quaternary Geology
<b>Specialisation:</b>	A1N - Second cycle, has only first-cycle course/s as entry requirements

## Decision

This syllabus has been approved by the Board of Science at Stockholm University 2012-08-27 and revised 2013-05-20 and 2015-03-02.

## Prerequisites and special admittance requirements

Competence equivalent to at least 90 ECTS credits in biology-earth sciences, geography or Earth sciences. Also required is knowledge equivalent to Swedish upper secondary school course English B/English 6.

## Course structure

Examination code	Name	Higher Education Credits
HELA	Permafrost - Interactions with Ecosystems and Hydrology	7.5

## Course content

The course describes and discusses permafrost and its variability in time and space from a process perspective. The course specifically deals with permafrost and soil processes and their interactions with ecosystems, hydrology and the global carbon cycle. Also, permafrost-hydrologic modelling and up-to-date permafrost research is presented and discussed.

## Learning outcomes

After the course, students are expected to:

- explain and evaluate the importance of permafrost in relation to biological, geomorphological and hydrological processes in the periglacial environment
- understand and describe basic concepts within permafrost-hydrological modelling
- evaluate the role of permafrost in the global carbon cycle and feedbacks to the climate system

## Education

Instruction consists of lectures, seminars and exercises.

Participation in seminars, exercises and any associated integrated instruction is compulsory. In the event of special circumstances, the examiner may, after consultation with the teacher concerned, grant a student exemption from the obligation to participate in certain compulsory instruction.

Instructions are in English.

**Forms of examination**

a. Knowledge assessment takes the form of written examination and oral presentations of assignments related to exercises and seminars.

Examination is in English.

b. Grades are assigned according to a seven-point goal-related grading scale:

A = Excellent

B = Very good

C = Good

D = Satisfactory

E = Sufficient

Fx = Fail (more work required before credit can be awarded)

F = Total fail

c. The grading criteria will be distributed at the beginning of the course.

d. To be awarded a pass, the minimum grade E is required as well as participation in all mandatory course components.

e. Students who fail an ordinary examination are entitled to sit additional examinations as long as the course is offered. There is no restriction on the number of examinations. Examinations also include other obligatory elements of the course. Students who have passed an examination may not resit it in order to achieve a higher grade. Students who have failed on two occasions are entitled to request the appointment of a different examiner for the next examination. Any such request must be made to the departmental board.

The course has at least two examinations for each academic year in the years in which instruction is provided. Intervening years include at least one examination.

f. Students awarded the grade Fx are given the opportunity to improve their grade to E. The examiner decides the supplementary assignments to be performed and the pass mark criteria. The supplementary assignments will take place before the next examination session.

**Interim**

Students may request that the examination be conducted in accordance with this course plan even after it has ceased to be valid. However, this may not take place more than three times over a two year period after course instruction has ended. Requests must be made to the departmental board. The provision also applies in the case of revisions to the course plan.

**Limitations**

The course may not be included in examinations in combination with course Glaciers and Permafrost (GE7003) or equivalent.

**Misc**

The course include teaching in the field, which may entail additional cost for the student.

**Required reading**

Course literature is decided by the departmental board and described thereafter in an appendix to the course plan.