

# Syllabus

for course at first level

**Climate Variability  
Klimatvariationer**

**7.5 Higher Education  
Credits  
7.5 ECTS credits**

<b>Course code:</b>	GE4021
<b>Valid from:</b>	Autumn 2014
<b>Date of approval:</b>	2014-01-20
<b>Department</b>	Department of Physical Geography
<b>Main field:</b>	Earth Sciences
<b>Specialisation:</b>	G1F - First cycle, has less than 60 credits in first-cycle course/s as entry requirements

## Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University 2014-01-20.

## Prerequisites and special admittance requirements

Competence equivalent to Physical Geography and Quaternary Geology 30 ECTS credits (GE2011), Tellus III 7.5 ECTS credits (GG4034) or Geography III 30 ECTS credits (GE5001).

## Course structure

Examination code	Name	Higher Education Credits
HELA	Climate Variability	7.5

## Course content

The course covers the natural and anthropogenic processes that control the Earth's climate and climate variability over time.

The course covers:

- Theories of climate variability on different time scales
- Theories of the climate control mechanisms and feedback mechanisms
- Natural climate archives
- Human impact on climate

## Learning outcomes

After the course, students are expected to:

- Describe and analyze the theories of climate variability on different time scales
- Describe and explain the different control mechanisms and feedback mechanisms in the climate system
- Analyze human impacts on the climate system
- Describe the different natural climate archives

## Education

Instruction consists of lectures, exercises and project work. Seminars can be included.

Participation in exercises, project work and seminars 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. The course is examined as follows: Knowledge assessment takes the form of:

- Written examination
- Written presentations

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 and participate in all mandatory instruction.

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 and the revisions of the course literature.

### **Limitations**

The course may not be included in examinations in combination with courses Physical Geography and Quaternary Geology (NK2040), Climate Variability (GE5005), Climate and Society (GE4011) or equivalent.

### **Misc**

The course is part of Bachelor's Programme in Earth Science, Distance Learning but can also be read as a separate course.

### **Required reading**

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