

Syllabus

for course at advanced level

Climate Model Simulations
Klimatmodellsimuleringar

**7.5 Higher Education
Credits**
7.5 ECTS credits

Course code:	GE7091
Valid from:	Spring 2022
Date of approval:	2021-06-17
Department	Department of Physical Geography
Main field:	Physical Geography and Quaternary Geology
Specialisation:	A1N - Second cycle, has only first-cycle course/s as entry requirements

Decision

This course syllabus was approved by the Board of Science at Stockholm University on 17/06/2021.

Prerequisites and special admittance requirements

For admission to the course, knowledge is required equivalent to a bachelor's degree in biology-earth sciences, geography, Earth sciences, physical geography or meteorology.

Alternatively, 15 credits from the Master's program in polar landscapes and Quaternary climates.

English 6 or equivalent.

Course structure

Examination code	Name	Higher Education Credits
HELA	Climate Model Simulations	7.5

Course content

The course deals with simulations from complex climate models. The course deals specifically with:

- physical laws that form the basis of climate models
- skills and tools for using climate models and analyzing the model results
- climate-driving processes under different climatic conditions, from past, present and future, as well as simulated response to these processes.

Learning outcomes

After completing the course, the student is expected to be able to:

- describe what a climate model is and how it can be used
- design and conduct a model experiment to test a hypothesis
- analyze model data based on a specific research question
- formulate and investigate a research question with a simplified climate model.

Education

Instruction consists of lectures, seminars and exercises.

The course is offered in English.

Forms of examination

a. The course is examined as follows: Assessment takes place through oral exams of individual project work.

The examiner can decide on adapted or alternative examination formats for students with disabilities.

The examination will be conducted in English.

b. A passing final grade requires participation in seminars and exercises. If special reasons exist, following consultation with the teacher involved, the examiner may grant the student exemption from the obligation to participate in certain compulsory instruction.

c. Grading: The course's final grade is set according to a seven-point criterion-referenced scale:

A = Excellent

B = Very good

C = Good

D = Satisfactory

E = Adequate

Fx = Failed, some additional work is required

F = Failed, much additional work is required

d. The course's grading criteria are handed out at the start of the course.

e. Students who receive a failing grade on a regular examination are allowed to retake the examination as long as the course is still provided. The number of examination opportunities is not limited. Other mandatory course elements are equated with examinations. A student who has received a passing grade on an examination may not retake the examination to attain a higher grade. A student who has failed the same examination twice is entitled to have another examiner appointed, unless there are special reasons to the contrary. Such requests should be made to the department board. The course includes at least three examination opportunities per academic year the course is offered. For the academic years that the course is not offered, at least one examination opportunity is offered.

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

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 the course was discontinued. Requests must be made to the departmental board. The provision also applies in the case of revisions of the course syllabus and revisions of the required reading.

Limitations

This course may not be included in a degree together with the course Climate Model Simulations (GE7077) or with equivalent courses.

Misc

This course is part (elective course) of the Master's Programme in Geomatics with Remote Sensing and GIS but can also be read as a separate course.

Required reading

The required reading is decided by the department board and published on the course catalog at least 2 months before the start of the course.