

Syllabus

for course at advanced level

Global Climate System
Globala klimatsystemet

15.0 Higher Education
Credits
15.0 ECTS credits

Course code:	MO7003
Valid from:	Spring 2008
Date of approval:	2007-11-19
Department	Department of Meteorology
Subject	Earth Science and Physical Geography
Specialisation:	A1N - Second cycle, has only first-cycle course/s as entry requirements

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University 2007-11-19.

Prerequisites and special admittance requirements

Bachelor's degree including at least 15 HECs in Mathematics, e.g. Mathematics for the Natural Sciences, 15 HECs (MM1001) or Mathematics for the Social Sciences, 15 HECs (MM1002). English B or equivalent.

Course structure

Examination code	Name	Higher Education Credits
7003	Global Climate System	15

Course content

The course deals with how physical and chemical processes affect the Earth's climate and the links between human activity and climate change. The course includes:

- how energy and momentum balance is maintained in the climate system
- energy balance models
- the observed climate and climate change
- coupled global atmosphere-ocean-landsurface models
- climate sensitivity
- time scales in the climate system
- reservoirs in the climate system
- formulation and testing of scientific hypotheses
- limitations of our understanding and their causes

Learning outcomes

After attending the course the student should be able to:

- formulate testable hypotheses for the climate system
- investigate the validity of the hypotheses with the help of models and/or observations
- present and scientifically examine the results of the hypothesis testing both orally and in writing

Education

The teaching consists of lectures, exercises and project work.

Forms of examination

a) Examination is done by oral and written presentation of the project work, and by opposition to projects carries out by other students. b) Grading is done on a seven step scale: A=excellent B=Very good C=Good D=Satisfactory E=Sufficient F=Unsatisfactory Fx=Entirely unsatisfactory. c) the grading criteria are handed out at the beginning of the course. d) For passing the course, at least grade E is required. e) Students that do not pass the regular examination have a right to attempt at least for further examinations as long as the course is given. As "examination" are understood also other compulsory parts of the course. Students that have passed an examination are not allowed to attempt another examination in order to receive a higher grade. Students that have failed an examination twice have a right to demand that another teacher is appointed to determine the grade. The request for this should be directed to the Board of the department.

Interim

Students may demand that the examination is performed according to this syllabus even after it has ceased to be valid. However, this may be done at most three times during the two years after the course was last given. The request for this should be directed to the Board of the department.

Misc

The course is a part of the Master's programme in Meteorology, Oceanography and Climate, but may also be taken as an individual course.

Required reading

The course literature is decided by the board of the Department, and is then presented in an attachment to the course syllabus.