Department of Meteorology

Stockholm University

Syllabus

for course at first level

The Earth's Climate and Climate Change, Introductory Course
Jordens klimat och klimatförändringar, orienteringskurs

7.5 Higher Education Credits
7.5 ECTS credits

Course code:	MO1004
Valid from:	Autumn 2007
Date of approval:	2007-08-28
Department	Department of Meteorology
Subject	Earth Science and Physical Geography
Specialisation:	G1N - First cycle, has only upper-secondary level entry requirements

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University.

Prerequisites and special admittance requirements

Basic eligibility.

Course structure

Examination code	Name	Higher Education Credits
1004	The Earth's Climate and Climate Change	7.5

Course content

The course contains the outlines of basic physical descriptions of the atmosphere and ocean, the dynamics and general circulation of the atmosphere and ocean, radiation processes in the atmosphere, the greenhouse effect, the importance of different greenhouse gases, particles and clouds for the Earth's radiation balance, meteorological observations and weather maps, historical climate changes, natural climate variations, anthropogenic climate change, weahter forecast models, climate models and climate scenario, climate change and the society.

Learning outcomes

After attending the course the student should be able to account for the outlines of: basic meteorological concepts and processes, the Earth's radiation balance and the greenhouse effect, the Earth's present climate and historical climate variations, how anthropogenic activities affect the climate and possible future climate changes.

Education

The teaching consists of lectures and exercises. Participaton in exercises and the associated tutorials is compulsory. If there are special reasons, the Examinator may, after consulting the course teacher, allow the student to omit certain parts of the compulsory teaching.

Forms of examination

a) Examination is done by a written and/or oral test. b) Grading is done on a seven-step scale: A=excellent B=Very good C=Good D=Satisfatory 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, as well as passed oral and/or written presentations of exercises and participation in compulsory

teaching. e) Students that do not pass the regular test have a right to attempt at least four further tests as long as the course is given. As "tests" are understood also other compulsory parts of the course. Students that have passed a test are not allowed to attempt another test 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 syllabys 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.

Limitations

A Bachelor's exam at the Faculty of Science, Stockholm University, can normally not contain more than 15 hp of orientation courses. Orientation courses can not be included in a Master's exam at the Faculty of Science, Stockholm University. The course may not be included in a degree together with Jordens klimat och klimatförändringar, orientation course, 5p (ME1150). Orientation courses at the Department of Meteorology can not be included in an exam together with other courses at the department (course code prefix ME or MO), with the exception of other orientation courses at the department.

Misc

The course is given as a separate 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.