Department of Meteorology

Stockholm University

Syllabus

for course at first level

Climate and Atmospheric Circulation
Klimat och atmosfärens cirkulation

15.0 Higher Education Credits
15.0 ECTS credits

Course code:	MO4001
Valid from:	Autumn 2016
Date of approval:	2016-10-03
Department	Department of Meteorology
Main field:	Meteorology
Specialisation:	G2F - First cycle, has at least 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 2016-10-03.

Prerequisites and special admittance requirements

Admission to the course requires knowledge equivalent to Atmospheric Physics and Chemistry, 30 credits (MO4000)

Course structure

Examination code	Name	Higher Education Credits
DYNM	Dynamical meteorology	7.5
CLIM	Climate and general circulation	5.5
PROJ	Project work climate and general circulation	2

Course content

The main purpose of this course is to understand the evolution of large-scale weather systems through baroclinic instability. The course also gives an introduction to the climate of the Earth and what governs it. You will learn about today's climate, historic climates as well as natural and anthropogenic climate change.

Learning outcomes

After taking this course the student should be able to:
- apply theory to the large-scale dynamics of the atmosphere
- orally present weather situations and their connection to the theory of dynamical meteorology
- account for the general circulation in the oceans and atmosphere and its interaction with essential biogeochemical cycles
- relate regional climate to the general circulation.

Education

Instruction consists of lectures, exercises, laboratory work and project work. Participation in laboratory work, project work 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.

Forms of examination

a) The course is examined as follows: Knowledge assessment takes the form of written examinations and written and oral presentations of project work. If tuition is in English, the examination may also be in English.
b. Grades are on a seven-referenced scale: A = Excellent, B = Very good C = Good D = Satisfactory E = Sufficient Fx = Fail, some more work required F = Fail, much more work is required
c. The grading criteria are handed out in the class.
d. To pass requires a minimum passing grade on all component parts, as well as participation in compulsory teaching. The final grade is calculated by weighting the grades from course parts, where the different parts are weighted in proportion to their extent.
e. Students who fail an ordinary examination have the right to undergo further tests as long as the course is given. The number of examinations is not limited. Having sampled all compulsory parts of the course. Students who have passed an examination may not retake the test for higher grade. A student who has successfully undergone two examinations in a course or part of a class, are entitled to have another examiner appointed, unless there are special reasons to the contrary. Such requests should be made to the Board. The course has at least two examinations for each part per academic year the year of tuition given. Intermediate years are given at least one examination.
f. At Fx can be given the opportunity to complete up to grade E. The examiner decides which supplementary tasks to be performed and which criteria to apply in order to pass on the supplement. The addition should take place before the next examination.

Interim

Students may request 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 departmental board. The provision also applies in the case of revisions to the course plan.

Limitations

The course may not be included in a degree in combination with courses Meteorology (ME2030), Dynamic meteorology II (MO3007), Climate and general circulation (MO3008) or equivalent.

Misc

The course is part of the Bachelor’s programme in Meteorology but can also be read as a separate course.

Required reading

The course literature is decided by the department board and published on the Department of meteorology’s website at least two months before the start of the course.