Department of Biology Education

Stockholm University

Syllabus

for course at advanced level

Ecology and climate change I
Ekologi och klimatförändringar I

7.5 Higher Education Credits
7.5 ECTS credits

Course code:	BL8052
Valid from:	Autumn 2011
Date of approval:	2010-08-20
Department	Department of Biology Education
Main field:	Biology
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.

Prerequisites and special admittance requirements

Admittance to the course requires knowledge equivalent to Ecology II 15 credits (BL5005) or Evolution and Biodiversity 15 credits (BL5006). (Three credits corresponds to approximately two weeks full-time studies). Swedish upper secondary school course English B or equivalent or one of the following tests. Cambridge CPE och CAE: Pass. IELTS : 6.0 (with no part of the test below 5.0). TOEFL (paper based): 550 (with minimum grade 4 on the written test part). TOEFL (computer based): 213. TOEFL (internet based): 79.

Course structure

Examination code	Name	Higher Education Credits
HELA	Ecology and climate change I	7.5

Course content

The course covers: • Effects of climate change on fauna and flora in a macro-evolutionary time perspective • Global biogeographic patterns and their relationship to climate • The ability of organisms to adapt to a changed climate; plasticity and genetic change • Effects of climate change on population dynamics and distribution patterns, including the importance of dispersal, landscape structure and anthropogenic influences • Effects of climate on timing of reproduction and seasonal patterns • Effects of climate change on species interactions, communities and ecosystems, including ecosystem services • The importance of climate change for conservation and restoration

Learning outcomes

It is expected that the student after taking the course will be able to: • Explain the links between climate and global biogeographic patterns • Discuss how the ability of different organisms to adapt to a changed climate under different conditions • Understand the basis of modelling the effects of climate change on abundance and distribution patterns • Understand how climate change can lead to altered species interactions through changes in distribution and seasonal patterns as well as what consequences changed patterns of species interactions may have for ecological systems and ecosystem services in a shorter and in a longer time perspective • Analyse problems associated with species conservation in a climate change context.

Education

The education consists of lectures, seminars, exercises and individual work.

Participation in seminars, exercises and group education associated with this is compulsory. An examiner may rule that a student is not obliged to participate in certain compulsory education if there are special grounds for this after consultation with the relevant teacher.

Forms of examination

a. Examination for the course is in the following manner: measurement of knowledge takes place through: Written or oral examination and written and/or oral presentations.

b. Grading is carried out according to a 7-point scale related to learning objectives:
A = Excellent
B = Very Good
C = Good
D = Satisfactory
E = Sufficient
Fx = Fail
F = Fail

c. Grading criteria for the course will be distributed at the start of the course.

d. A minimum grade of E is required to pass the course, together with:

- participation in all compulsory education

e. Students who fail to achieve a pass grade in an ordinary examination have the right to take at least further four examinations, as long as the course is given. The term “examination” here is used to denote also other compulsory elements of the course. Students who have achieved a pass grade on an examination may not retake this examination in order to attempt to achieve a higher grade. Students who have failed to reach a pass grade on two occasions have the right to request that a different teacher be appointed to set the grade of the course. A request for such appointment must be sent to the departmental board.

Interim

Students may request that the examination is carried out in accordance with this syllabus even after it has ceased to apply. This right is limited, however, to a maximum of three occasions during a two-year-period after the end of giving the course. A request for such examination must be sent to the departmental board.

Misc

The course is given in collaboration with the Department of Physical Geography and Quaternary Geology and is a component of the Master's Programme in Biology. The course can also be taken as an individual course.

Required reading

Course literature is decided by the departmental board and is described in an appendix to the syllabus.