

Syllabus

for course at advanced level

Ecological and evolutionary responses to climatic variation
Ekologiska och evolutionära effekter av klimatvariation

**15.0 Higher Education
Credits**
15.0 ECTS credits

Course code:	BL7053
Valid from:	Autumn 2018
Date of approval:	2023-11-21
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

Admission to the course requires knowledge equivalent to Ecology II, 15 credits (BL5005) or Evolutionary biology 15 credits (BL5006). Swedish upper secondary school course English B/English 6 or equivalent.

Course structure

Examination code	Name	Higher Education Credits
DEL1	Theory	10
DEL2	Project	5

Course content

a. The course will consider how aquatic and terrestrial ecosystems have been, are, and will be impacted climate change. This course will focus on animals and plants, and integrate ecology, physiology, behavior and evolution in understanding responses to climate change. Ecological and evolutionary responses by individuals, populations and communities will be considered.

b. The course consists of the following course units:

Unit 1. Theory 10 hp

Unit 2. Project 5 hp

Learning outcomes

Upon completion of the course, students are expected to be able to:

Unit 1. Theory 10 credits:

- Explain how different ecosystems are predicted to be impacted by future climate change
- Distinguish ecological, physiological, behavioral, and evolutionary traits that may influence whether species will move, adapt or be threatened with extinction in response to climate change
- Understand how climate change may influence species abundance and distributions
- Evaluate the effects of changing climate on communities and ecosystems

Unit 2. Project 5 credits:

- Evaluate the effects of changing climate on communities and ecosystems
- Critically assess scientific papers on ecological and evolutionary responses to climate change and communicate those findings through assessments

Education

Instruction consists of lectures, seminars, computer- and group exercises as well as case-studies. Participation in seminars, computer- and group exercises 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 of unit 1 takes the form of written examination as well as written and oral presentations. Knowledge assessment of unit 2 takes the form of written and oral presentations.

If the instruction is in English, the examination may also be conducted in English.

b. Grades will be set according to a seven-point scale related to the learning objectives of the course:

A = Excellent

B = Very good

C = Good

D = Satisfactory

E = Adequate

Fx = Fail, some additional work required

F = Fail, much additional work required

c. The grading criteria will be distributed at the beginning of the course.

d. In order to pass the course, students must receive a passing grade on all course units and participate in all mandatory instruction. The final grade on the course is determined by weighting the grades from all course units, where each grade is weighted in relation to the scope of the course unit.

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 two examination opportunities for each course unit per year when the course is given. At least one examination opportunity will be offered during a year when the course is not given.

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

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 course instruction has ended. Requests must be made to the departmental board. The provision also applies in the case of revisions to the course plan (and the revisions of the course literature).

Misc

The course can be a component of master's programme in biology and can also be taken as an individual course.

Required reading

Course literature is decided by the departmental board and is published on the course page in the online course catalogue at least 2 months before the course starts.