

# 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**

<b>Course code:</b>	BL7053
<b>Valid from:</b>	Autumn 2018
<b>Date of approval:</b>	2018-05-14
<b>Department</b>	Department of Biology Education
<b>Main field:</b>	Biology
<b>Specialisation:</b>	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 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 includes the following parts:

Part 1. Theory 10 hp

Part 2. Project 5 hp

## Learning outcomes

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

Part 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

Part 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**

The education consists of lectures, seminars, computer- and group exercises as well as case-studies. Participation in seminars, exercises and group education associated with this is compulsory. Participation in seminars, laboratory work and group work as well as group education associated with this 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. Examination for the course is in the following manner: measurement of knowledge for part 1 takes place through written examination as well as written and oral presentations.

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

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. To pass requires a minimum passing grade E on all component parts, as well as participation in compulsory teaching. The final grade calculated by weighing the grades from course sections, where the different parts are weighted in proportion to their extent.

e. Students who fail an ordinary examination are entitled to sit additional examinations as long as the course is offered. There is no restriction on the number of examinations. Examinations also include other obligatory elements of the course. Students who have passed an examination may not resit it in order to achieve a higher grade. Students who have failed on two occasions are entitled to request the appointment of a different examiner for the next examination. Any such request must be made to the departmental board. The course has at least two examinations for each academic year in the years in which instruction is provided. Intervening years include at least one examination.

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 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 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 at [www.big.su.se](http://www.big.su.se) at least 2 months before the course starts.