Department of Biology Education

Stockholm University

Syllabus

for course at advanced level

Plants in Environmental Treatment
Växter i miljöns tjänst

15.0 Higher Education Credits
15.0 ECTS credits

Course code:	BL7019
Valid from:	Autumn 2007
Date of approval:	2006-09-27
Department	Department of Biology Education
Subject	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 30 credits in Chemistry, including a minimum of 7,5 credits in Biochemistry, Cell and Molecular Biology 15 credits, Diversity and Phylogeny of Organisms 15 credits, Physiology 15 credits and Ecology, Floristics and Faunistics 15 credits. (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
7019	Plants in Environmental Treatment	15

Course content

The course covers environmental contamination with toxic chemicals, and how plants function in contaminated areas, including adaptations in both their physiology and biodiversity. Toxicity testing with plants, mapping of contamination events and their extent with the help of indicator plants. Phytoremediation, i.e. different methods where plants are used to mitigate hazardous environmental contamination. Hands on practicals and demonstrations will be performed to familiarise the students with available techniques, and give training in how to actually perform mitigation practices.

Learning outcomes

It is expected that the student after taking the course will have a thorough understanding of how to use plants as indicators of contamination as well as how a range of plants can be used to actually reduce the level of toxic contents in the environment.

Education

The education consists of lectures, group education, laboratory exercises, project work and eventual study visits.
Participation in group education, laboratory exercises, project work 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 and/or oral examination.

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:
•approved written and oral presentations
•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.

Limitations

The course can not be included in a degree together with the course Plants in Environmental Treatment 10 p (BI3860) or the equivalent.

Misc

The course is a component of the Master's Programme in Biology, and it 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.