

Syllabus

for course at first level

**Ecotoxicology
Ekotoxikologi**

**15.0 Higher Education
Credits
15.0 ECTS credits**

Course code:	BL5012
Valid from:	Autumn 2007
Date of approval:	2006-09-27
Department	Department of Biology Education
Subject	Biology
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.

Prerequisites and special admittance requirements

Admission to the course requires knowledge equivalent to Cell and Molecular Biology 15 credits, Diversity and Phylogeny of Organisms 15 credits, Physiology 15 credits and Ecology, Floristics and Faunistics 15 credits.

Course structure

Examination code	Name	Higher Education Credits
5012	Ecotoxicology	15

Course content

The course will give a comprehensive view on environmental contaminants and cover all topics in ecotoxicology from transport, fate, and chemical characteristics of contaminants to effects on multiple biological organization levels. The course includes the following elements: ecotoxicological theory, ecotoxicological working methods, and training in theoretical and practical problem solving of ecotoxicological issues. In more detail the course will cover: groups of environmental contaminants, their transport, fate, and uptake in biota. Toxicity tests. Effects on molecular, cellular, gene, population and ecosystem level. Biomarkers. Ecotoxicology in the society. Risk assessment.

Learning outcomes

It is expected that the student after taking the course will be able to:

- explain how different contaminants' characteristics and the prevailing environmental conditions affect the fate of contaminants in the environment
- describe the basic principles for direct or indirect effects of environmental contaminants on different biological organization levels
- seek, evaluate, collate, and present ecotoxicological information
- perform and report standard toxicity tests • plan, perform, analyze, and present a small research project in a group in the ecotoxicological field
- assess risks with pollutants and suggest suitable measures of pollution remediation

Education

Instruction consists of lectures, seminars, study visits, laboratory exercises, field studies, project work as well as written and oral presentations.

Participation in seminars, laboratory exercises, field studies, project work, written as well as oral presentations 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 oral presentations as well as 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 laboratory exercises
- approved field studies
- 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 Ecotoxicology 10 p (BI4420) or the equivalent.

Misc

The education includes collection of living plants and animals, and studies where these animals are killed and examined. The course includes compulsory elements in the field, which entail certain costs for the student. The course is a component of the Bachelor's Programmes in Biology and Marine 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.