



DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

BIO430 Ecological Toxicology: Ecology, 15 credits

Ekotoxikologi med ekologisk inriktning, 15 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Faculty of Science on 2010-10-26 and was last revised on 2020-03-25 by Department of Biological and Environmental Sciences to be valid from 2020-03-25, spring semester of 2020.

Field of education: Science 100%

Department: Department of Biological and Environmental Sciences

Position in the educational system

The course can be part of the following programmes: 1) Environmental Sciences (N2MVN), 2) Ecotoxicology, Master's Programme (N2TOX) and 3) Biology, Master's Programme (N2BIO)

Main field of studies

Biology

Environmental Science

Specialization

A1N, Second cycle, has only first-cycle course/s as entry requirements

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Entry requirements

Alt 1: Fundamental course in Biology 6 ETCs or similar with Grade: Pass

Alt 2: Fundamental course in Environmental Sciences, Ecology and evolution - fundamental course (BIO915), etc...

Learning outcomes

The focus of this course is on effects of chemicals on non-human organisms within an ecosystem, using an ecologically oriented approaches to ecotoxicology, with an

emphasis on community ecotoxicology.

After completing of the course the student is expected to:

Knowledge and understanding

- describe principles behind approaches and methods in community ecotox,
- discuss problems connected to causality in experimental and field studies
- summarise pros and cons with ecotoxicological studies on different biological organisational levels

Competence and skills

- implement different experimental ecotoxicological methods for communities,
- handle and analyse uni- and multivariate data
- collect and evaluate scientific information on mode of action, use and ecological effects of chemicals,
- present and discuss scientific knowledge orally and in writing, both in a scientific and popular science context,

Judgement and approach

- design, perform and analyse ecotoxicological experiments to study ecological effects of chemicals,
- critically compare and evaluate the suitability of experimental methods in community ecotox,
- critically compare and evaluate ecotoxicological approaches and results.

The course is sustainability-focused, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria. The content also constitutes the course's main focus.

Course content

The course is fulltime over approximately ten weeks. Teaching comprises of lectures, computer exercises, seminars, laboratory exercises, and own work.

Sub-courses

1. Part 1 Practicals (*Delkurs 1 Praktik*), 7 credits

Grading scale: Pass with Distinction (VG), Pass (G) and Fail (U)

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The course is laboratory intensive with the aim to provide familiarity with ecotoxicological methods to describe and evaluate effects of chemicals on primarily

aquatic populations and communities. Field sampling and model ecosystems are parts of the laboratory exercises and can in part take place at Kristinebergs Marine research station, Sven Lovén Centre for Marine Infrastructure, Fiskebäckskil.

Other practicals are computational exercises, student seminars, poster session to present projects, oral and written reports. The combination of these practicals can vary year to year.

2. Part 2 Theory (*Delkurs 2 Teori*), 8 credits

Grading scale: Pass with Distinction (VG), Pass (G) and Fail (U)

Grades: Pass with distinction (VG), Pass (G), Fail (U)

The aim of the theoretical part is to complement and expand knowledge in ecotoxicology, primarily on population, community, and ecosystem level.

Ecotoxicological principles, approaches and

Form of teaching

Language of instruction: English

Assessment

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

Course evaluation

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