



# MJ1508 Ecology and Environmental Effects 7.5 credits

Ekologi och Miljöeffekter

This is a translation of the Swedish, legally binding, course syllabus.

## Establishment

Course syllabus for MJ1508 valid from Autumn 2013

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

Basic requirements

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

The overall aim of the course is to provide relevant and useful knowledge in ecology and about environmental effects in order to understand the human impact on the ecosystem and the possibilities to build a human society based on sustainable development.

This understanding means that after the course you should be able to:

- Describe and explain the biogeochemical circulation of water, carbon, methane and nitrogen and the connection between abiotic and biotic factors.
- Explain and describe how energy and materials are transported through food webs.
- Describe and explain important ecological concepts such as ecological services, resilience and carrying capacity.
- Describe and understand today's important environmental threats e.g. climate change, organic pollutants, eutrophication and negative impact on biological diversity.
- Identify and have basic knowledge about earth's great biomes.
- Have a basic knowledge and understanding about strategies and solutions for the environmental problems and the possibility to build a sustainable society.
- Describe and analyze environmental impacts from different forms of energy production.

## Course contents

Important subjects that the course will cover are basic ecological concepts and an up to date picture of today's important environmental threats such as global warming, spreading of organic pollutants and the loss of biological diversity. The course will also give basic knowledge about how the society works with different strategies in order to solve the problems and the possibilities to build a more sustainable society.

Independent group assignments around different case studies will increase the knowledge and will be an important part of the course. An important part of the course will also be a field trip to some ecosystems around Stockholm.

## Course literature

Kurslitteratur meddelas vid kursstart.

## Examination

- FÄLT - Field Exercise, 1.5 credits, grading scale: P, F
- PRO1 - Project Work, 3.0 credits, grading scale: P, F
- TEN1 - Written Exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

## **Ethical approach**

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.