



# AL2156 Applied Ecology 7.5 credits

## Tillämpad ekologi

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

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

## Establishment

The course syllabus is valid from spring term 2023 according to the Head of school decision: A-2022-2467, 3.2.2. Date of decision: 2022-10-12

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Environmental Engineering, Mechanical Engineering

## Specific prerequisites

Degree of Bachelor alternative 180 credits at KTH and 7.5 credits of environmental knowledge corresponding to courses MJ2615 or MJ2659.

Courses from upper secondary school corresponding to the courses Eng B/6 according to the Swedish upper secondary school system.

## Language of instruction

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

## Intended learning outcomes

The course aims at providing understanding of advanced ecological theory and how ecological knowledge could be applied in society in environmental and sustainability issues. Ecological applications will be related to technical processes, environmental effects and sustainable development. Ecological methodology and experimental design will also be discussed during the course.

The overall aim of the course is to provide in depth knowledge about ecology and the human impact on ecosystems. The course should also show on the use of ecological knowledge for different sectors in society.

After the course the student should be able to:

- Use ecological knowledge in order to understand the distribution of individuals, populations and different distribution of species in ecosystems.
- Discuss different theories that may explain biological diversity and threats towards biological diversity.
- Understand the importance of different ecosystems services for technology, society and environment.
- Explain the ecological background to the most important environmental problems in the world.
- Use some common ecological methods and applications.
- Scientific methods used for ecological studies.

## Course contents

A central part of the course is ecological theory and how ecological knowledge may be used to solve today's major environmental challenges e.g. global warming, losses of biological diversity and the spreading of organic pollutants. The course will also give a picture on how an ecological approach and methods may be used to investigate different environmental questions.

Independent group assignments in the field around different ecological questions will be the link between theory and practice.

## Examination

- FÄL1 - Field Study, 1.5 credits, grading scale: P, F
- PRO1 - Project Work, 3.0 credits, grading scale: P, F
- TEN1 - Examination, 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.

The course includes a mandatory longer field trip outside Stockholm. For this, food and housing will be paid for by students.

## Other requirements for final grade

Passed examinations

## 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.