Methods in Ecology

Programme course

7.5 credits

Metoder inom ekologi

NBID73

Valid from: 2019 Spring semester

Determined by
Board of Studies for Chemistry, Biology and Biotechnology

Date determined
2018-08-31

Main field of study
Biology

Course level
Second cycle

Advancement level
A1X

Course offered for
- Master's Programme in Ecology and the Environment

Prerequisites
120 ECTS including 90 ECTS in Biology and a second course in Ecology.

Intended learning outcomes
The aim is for the students to achieve a deeper understanding of scientific methods used in ecology and environmental sciences: how to plan, perform, analyze and report ecological experiments and comparative studies. Having successfully passed the course, the students should be able to:

- Extract and compile information from scientific texts
- Identify ecological problems and formulate appropriate hypotheses
- Plan and perform ecological experiments and comparative studies
- Analyze primary data, present results, and draw conclusions
- Communicate science, both orally and in writing
- Apply systems thinking to understand feedbacks within biogeophysical systems as well as to human decision making in order to identify linkages to Sustainable Development Goals.

Course content
Ecological theory and methods are studied through four modules: 1) analyze and extract relevant information from literature; 2) use systems thinking to identify and map dependencies and make connections with Sustainable Development Goals; 3) practice experimental design and observation studies in the field; and 4) apply advanced methods for data analysis. Together, these four modules advance students' command of scientific methods.

Teaching and working methods

The modules consist of lectures, seminars, workshops and applied case studies individually and in groups. Extra travelling and living costs must be paid by the student.

Examination

UPG1	Literature report	1.5 credits	U, G
PRA2	Project report	2 credits	U, 3, 4, 5
UPG3	Seminar and presentation	2 credits	U, 3, 4, 5
UPG2	Data analysis	2 credits	U, G

The final grade is the average of the individual examination grades rounded up.

Grades

Four-grade scale, digits, U, 3, 4, 5

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Agneta Johansson

Examiner

Lars Westerberg

Education components

Preliminary scheduled hours: 80 h
Recommended self-study hours: 120 h

Course literature

Articles

Scientific articles.