

**Population ecology: theory and applications, 7.5 credits**

Populationsekologi: teori och tillämpningar, 7.5 hp

Third-cycle education course

6FIFMA2

Department of Physics, Chemistry and Biology

Valid from: Second half-year 2024

**Approved by**

**Approved**

**Registration number**

## Entry requirements

Entry requirement for studies on third-cycle education courses

- second-cycle degree in biology, ecology or equivalent,
- 240 credits in required courses, including at least 60 second-cycle credits,  
or
- acquisition of equivalent knowledge in some other manner

## Learning outcomes

By the end of the course the students will be able to:

- Understand central concepts in population ecology and explain the relationship to challenges in environmental and nature conservation
- Perform sensitivity analysis at the population level and interpret the results
- Explain the relationship between ecological theory and applications in environmental and nature conservation

## Contents

The course deals with the structure and dynamics of populations in time and space, interaction between species, and how ecological systems react to different types of disturbances. Furthermore, how principles and theories from these areas can be applied to nature and environmental conservation problems, such as: conservation of biological diversity and endangered species; sustainable use of natural resources (harvesting, hunting, fishing); pest control; ecosystem resilience and resilience. To absorb these concepts, students will read primary scientific literature in areas relevant to the course. Critical assessments and oral presentations of scientific literature.

## Educational methods

The course consists of lectures and computer labs with follow-up seminars. The computer labs highlight the points covered in the course literature. The course is largely based on independent work (individually and in small groups). This applies to both theory studies and computer labs. The teaching has a problem-based structure. Work results and acquired knowledge are continuously reported both orally (in seminar form) and in writing (reports of computer labs). Seminars and computer labs are compulsory

## Examination

Computer exercises with written reports and seminars (mandatory)

## Grading

Two grade scale, older version

### **Course literature**

A list of recommended literature will be provided by the course coordinator before the start of the course.

### **General information**

The course is planned and carried out according to what is stated in this syllabus. Course evaluation, analysis and suggestions for improvement should be fed back to the Research and PhD studies Committee (FUN) by the course coordinator.