



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFS0147 Conservation ecology, 2.0 credits

Syllabus approved

2018-01-26

Subjects

Biology

Education cycle

Third cycle

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

Populations, communities and ecosystems AND resources, competition and predation (or equivalent)

Objective, including learning outcomes

The aim of the course is to give the student an introduction to conservation ecology.

Learning outcomes: Upon completion of the course the student should be able to:

- Describe a variety of mechanisms through which humans affect the environment
- Describe several conservation ecological paradigms, such as strict protection, conservation through sustainable use, and rewilding, and the similarities and differences among these paradigms
- Describe the biological basics of sustainable harvesting
- Explain what causes species to be endangered
- Understand the population genetics of small populations and inbreeding
- Apply theory on ecosystem services to quantify the loss caused by degraded habitats
- Apply theory on communities, food webs and ecosystem functioning to construct conservation plans for species, communities and ecosystems
- Explain the concept of trophic downgrading and its possible consequences

Content

We will start with introducing how humans have influenced the environment, physically as well as chemically (pollution, climate change). We will continue with showing how the field of conservation ecology aims to provide the science to mitigate these negative anthropogenic effects by developing conservation measures based on theoretical understanding of populations, communities and ecosystems. This includes, among other things, use of knowledge of food webs and species interactions to sustainably manage pests and pollutants, and knowledge on population and community ecology to protect and conserve species and their habitats. We will show how conservation ecology has gone through several paradigm shifts and changing approaches towards conservation; strict protection during the early days of conservation, conservation based on sustainable use of resources, including the concept of ecosystem services, and more recently, conservation focused on restoring ecosystems and their functioning such as the concept of rewilding.

Requirements for examination

Marking scale: Passed / Failed

Pass grade requirements: Approved essay

Additional information

Pedagogical form: The course consists of lectures and self-study as the course aims at providing theoretical understanding of different concepts in ecology. This will

be tested with a written essay.

Preliminary time schedule:

Day (working days) 1-4:

9.00 – 12.00 Lecture

13.00 – 16.00 Self-study of literature + writing of essay

Day 5-8:

9.00 – 16.00 Writing an essay as exam

The Department reserves the right to cancel the course if there are not more than 5 students who have applied for the course. There is no tuition fee. The student is responsible for any housing and travel costs. Students belonging to the ECOS research school have priority to the course.

Part of research school: ECOS, Ecology and society

Education cycle: Third

Scope: Basic course, aimed at students with non-ecology background

Responsible department

Department of Wildlife, Fish, and Environmental Studies