ENV-422

Applied ecology

Grossiord Charlotte

Cursus	Sem.	Type
Environmental Sciences and Engineering	MA1, MA3	Opt.
Territories in transformation and climate minor	H	Opt.
Urban Planning and Territorial Development minor	H	Opt.

Language of teaching	English
Credits	4
Session	Winter
Semester	Fall
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
Courses	2 weekly
Exercises	1 weekly
TP	1 weekly
Number of positions	

Summary

The course will provide the ecological systems' knowledge needed to question applied sustainability solutions. We will critically assess the complexity of current environmental issues, illustrating basic ecological concepts and principles.

Content

The course combines elements of a classic lecture, group discussions, problem-based learning and fieldwork. Our central aim is to balance participants' respect for complexity with a sense of possibility by providing examples from the vast solution space offered by ecological systems, such as e.g. green infrastructure to manage water. The class will include two excursions where the students will have the opportunity to discuss critical ongoing problematics faced by environmental managers.

Keywords

applied ecology, resource management, forest ecosystems, trees, community ecology, species interactions, ecosystem functions and services, biodiversity, climate change

Learning Prerequisites

Recommended courses

Fundamentals in Ecology (ENV 220)

Important concepts to start the course

None

Expected student activities

- Understand the complexity of interactions and structures in ecosystems. They know how ecosystem processes, functions and services interact and feed back across multiple spatio-temporal scales (in general, plus in-depth case examples);
- Understand that biodiversity and the interaction between organisms are an integral part of ecosystems. They are aware that the link between biodiversity and process/function/service is rarely fully understood. They how to honestly deal with this lack of understanding and can nevertheless find, critically analyze and communicate solutions.
- Understand the importance of ecosystem services for society.

Assessment methods

Oral presentation and written report

Resources

Moodle Link

- https://go.epfl.ch/ENV-422