

- Faculté des sciences
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Evidence-based conservation of ecosystems (3CB2005)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en conservation de la biodiversité	Cours: 30 pg	Voir ci-dessous	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante

Prof. Clara Zemp, Dr. Samantha Suter, Dr. Giorgia Camperio

Contenu

The course focuses on ecosystem-wide approach to conservation that is based on scientific evidence.

The course is organized in three modules :

Module 1 : Key and advanced topics in ecosystem approach to conservation :

- Concepts of biodiversity, ecosystem functioning and services and how they related
- Key findings from biodiversity-ecosystem functioning research
- Ecosystem-level assessment of land-use impact on biodiversity: above- and below ground, across spatial scales
- Ecological classification, from habitats to biomes
- Alternative stable states, ecosystem resilience, tipping points and ecosystem collapse
- Restoration ecology and ecological restoration
- Rewilding

Module 2 : synthesizing environmental evidence on a specific ecosystem conservation topic

In this module, students will develop a systematic literature review on a specific question relevant to ecosystem conservation. The format of module is based on individual coaching of groups of students, who are expected to follow the guidelines from the Collaboration for Environmental Evidence (online method courses and guidelines available openly).

Module 3 : Excursion

The excursions to two major sites of terrestrial-freshwater transition ecosystems:

- Tourbière des ponts de martel : haut-marais (peat bog)
- Grande Cariçaie : mosaic of habitats from the lake to the forest, in the greatest lake marsch complex area in Switzerland.

Forme de l'évaluation

Graded continuous assessment.

- Participation in the in-class activities and excursions
- A systematic literature review (systematic review and systematic mapping)

(specific modalities will be defined on Moodle).

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Modalités de rattrapage

If the final mark is insufficient and results in a failure, the student will have to prepare one scientific review report (1000-2000 words without references, and including 5 references) related to a topic suggested by the professor. The report should be handed in two weeks before the official start of the exam session for which a second attempt is made. In addition, the student will pass an oral exam of 30 minutes scheduled during the exam session. A failure to hand in the report or an unjustified absence from the oral exam constitutes a second and definite failure from the course.

Documentation

Documents will be provided on Moodle

Forme de l'enseignement

The format is a mix of lectures, field and virtual excursions, in-class activities in small groups including coaching and feedback sessions.

Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Explain the link between biodiversity, ecosystem functioning and services with a scientific perspective
- Describe a specific ecosystem and the current state of knowledge on the associated conservation measures
- Discuss science evidences in conservation and restoration of ecosystems

Compétences transférables

- Criticise arguments in a constructive manner
- Communicate clearly and concisely
- Synthesise informations and evidences on a specific topic
- Identify a scientific evidence
- Work in group