- Faculté des sciences
- www.unine.ch/sciences

Evolutionary ecology (3BL2216)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en biologie	**Cours: 3 ph**	**controle continu: 1**	3

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

Période d'enseignement:

- Semestre Printemps

Equipe enseignante:

Daniel Croll

Objectifs:

Understanding how the ecology and evolutionary history of species explain major aspects of biodiversity.

Contenu:

Evolutionary ecology provides a bridge to link two major areas of biology that can hardly be understood on their own. The course will start with an introduction to major concepts in evolutionary ecology such as life history traits, sex allocation, phenotypic plasticity, species interactions and cooperation. Then, the course will focus on a series of topics that are particularly relevant to understand major patterns of biodiversity and/or impact human society. These topics will include the evolution of antibiotic resistance, the role of aging and senescence, the process of speciation, the evolutionary ecology of diseases, the evolution of sex and more.

The presentation of recent literature will be used to stimulate discussions and outlooks on what major questions remain unsolved in this area.

Forme de l'évaluation:

The course will be evaluated based on four elements with the following weights:
20% Active participation in article discussions, preparation of questions for each article discussion and lecture attendance
30% Presentation of a scientific article and guiding the discussion (see guidelines on Moodle for more details)
15% Presentation of the planned research proposal (see guidelines on Moodle for more details)
35% Research proposal on a relevant topic in evolutionary ecology (see guidelines on Moodle for more details)

If a students fails to obtain a sufficient grade, the student will have to prepare a review on a topic presented in class. The review will have to be 10 pages and contain at least 20 scientific references of research articles. The report will be due on the Friday one week after the end of the semester.

Documentation:

Slide handouts, articles to present (see course Moodle)

Pré-requis:

Basic concepts in ecology and evolution

Forme de l'enseignement:

Lectures, student presentations and discussions