

- Faculté des sciences
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## From genes to ecosystems (3BL2236)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en biologie</b>	<b>Cours: 30 pg</b>	<b>controle continu: 1</b>	3

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

### Période d'enseignement:

- Semestre Printemps

### Equipe enseignante:

Prof. Sergio Rasmann & Moe Bakhtiari

### Objectifs:

The objective of this course is to give an overview of methods and concepts used in ecology, with focus on how to perform integrative science (precisely, from cells to ecosystems). Students will acquire basic knowledge on how organisms are interacting in nature to maintain stable ecosystems, and how to answer fundamental questions in ecology. Additionally, we will explore current interdisciplinary approaches used to study species interactions and their function. These notions will be acquired through a combination of theoretical courses and excursions.

### Contenu:

This course includes a theoretical part and excursions.

Theoretical part: After an initial introduction to theoretical concepts and examples for performing integrative research and species interaction, students will be introduced to the different ecosystems around the Canton of Neuchâtel.

Excursions: Two excursions will allow students to discover contrasted ecosystems in the region of Neuchâtel (e.g. nutrient-poor dry meadows, peatlands, forests) and apply some of the methods discussed in the theoretical part for answering ecological questions.

### Forme de l'évaluation:

2 in-class assignments, 1 presentation, and 1 excursion assignment, and 1 final report.

In case of failure, the student can provide a corrected version of the final report one week after the previous deadline in order to reach sufficiency. If the a second failure occurs, the student will be asked to rewrite a full-length final report for the upcoming the session "de rattrapage".

### Pré-requis:

Participation to excursions is limited to students with good physical capacity (walking in uneven terrain, and uphill at standard speed). Students unsure of their capacity are required to contact Sergio Rasmann before the excursions.

### Forme de l'enseignement:

This course includes a theoretical part and excursions. Students will apply concepts discussed in the courses during the excursions and will prepare a short reports based on their observations and interpretations.