

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

Ecological genomics (3BL2313)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en biologie	Cours: 28 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. Daniel Croll

Contenu

This course provides an introduction to ecological genomics, with a strong focus on the analyses of within species genetic diversity and applications to conservation biology. Current applications and the effectiveness of conservation genomics approaches will be critically discussed.

1. Fundamentals of within-species genomic analyses
2. Assessments of genetic health of species
3. Main threats to genetic health including hybridization, harmful mutations, etc.
4. Case studies of conservation genomic approaches

Forme de l'évaluation

The evaluation is based on the following continuous assessment elements:

- Active contributions to discussions (10%)
- Data analysis practical (20%)
- Application presentations (30%)
- Elaboration of a conservation genomics case study application proposal (40%)

Modalités de rattrapage

If the final mark is insufficient and results in a failure, the student will have to prepare one critical essay (3000 words) on one of the topics discussed during the course. The topic will be fixed by the lecturer. The essay should be handed in two weeks before the exam session for which a second attempt is made. In addition, the student will pass an oral exam of 15' scheduled during the exam session. A failure to hand in the critical essay or an unjustified absence from the oral exam constitutes a second and definite failure from the course.

Documentation

Slides, articles and practical documentation will be made available through Moodle and other sources.

Forme de l'enseignement

Lectures, practical work, tutorial creation and individual work.

Objectifs d'apprentissage

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

- Develop a genetic health case study
- Provide critical feedback to peers
- Interpret strategies of species conservation
- Analyse evidence presented in the literature
- Discuss current topics in ecological genomics
- Present scientific articles

Compétences transférables

- Present effectively to peers
- Translate theoretical knowledge into practice

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

Ecological genomics (3BL2313)

- Write a scientific text
- Explain complex findings
- Review scientific literature