

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

Modelling (3BL2189)

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

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

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

Prof. Jacob Koella

Objectifs:

(i) To obtain basic experience in modelling of biological systems (ii) To understand differential equation models, parameter estimation and sensitivity (iii) To learn how to create, simulate and analyse models using the software R. (iv) Understanding of the theoretical basis of population and quantitative genetics

Contenu:

(1) Lectures and practical exercises on models of population and quantitative genetics. (2) Each student models a chosen system and writes a report in the format of a scientific paper on the results.

Forme de l'évaluation:

Exercises (handed in each week) and the individual report (handed in before Christmas) will be graded. An modelling exercise will be given in the last lecture to evaluate the programming skills. Each of these aspects will count for 1 third of the grade. In case a student fails, an oral evaluation of aspects of population genetics and programming will be arranged on an individual basis during the spring semester.

Documentation:

The lecture notes and solved exercises will be available on Claroline

Pré-requis:

Basic undergraduate biology and mathematics