

LMD5 — Fiche UE du département Biologie-Écologie

Niveau : M1 S8

Intitulé : Population genetics (-)

Code : HAB816B

Responsable(s) : Yannis MICHALAKIS

Co-responsable(s) : Sandrine MAURICE

Contact(s) : yannis.michalakis [at] ird.fr, sandrine.maurice-oms [at] umontpellier.fr

Moodle : -

Nombre ECTS : 3

Nombre d'heures : CM = 12 — TD = 12 — TP = 0 — Terrain = 0 — Séminaires = 0 — SPS = 0

Statut par parcours : B2I (-), BioGET1 (-), BioGET2 (-), CEPAGE (-), DARWIN (-), EcoSystèmes (-), EGEN (-), MédiACCES (-), MEME (OBL), PAL (), Agreg (-).

Description de l'UE : The objective of this course is to provide the theoretical background for understanding, and potentially being able to use and apply the principles of how selection will affect the evolution of populations. Y. Michalakis describes the basics of selection theory and shows with elementary algebra that it is possible to derive some fundamental results in Population Genetics, such as Fisher's Fundamental Theorem. He also gives an introduction to mutation-selection balance and two-locus theory. The latter topics are put in perspective in the courses by T. Lenormand on the evolution of sexual reproduction, migration and local adaptation. T. Lenormand also presents the theory that allows understanding the dynamics of adaptation. G. Martin's courses explain how stochastic effects interact with selection to influence the fate of adaptive mutations.

Compétences visées (Savoir, Savoir-Faire, Savoir-Être) : Intermediate skills in population genetics

Prérequis (compétences et/ou UE) : -

Modalités de contrôle des connaissances : Contrôle terminal

Informations additionnelles : -