

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

Méthodes de laboratoire (3BL2166)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en biologie des parasites et écoéthologie (*)	Cours: 2 ph	contrôle continu: 1	6

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

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

Teachers: Prof. Maarten Voordouw, Prof. Fabrice Helfenstein, Prof. Kurt Pfister
Assistants: Dr. Liselore Roelfstra, Mme Vlimant, M. Durand, M. Jacquet

Objectifs:

The objective of this course is to teach students basic laboratory skills that are common to biology. The parasitology labs (1, 2, 3, 4, 9) will use common molecular methods to investigate aspects of Lyme borreliosis, a tick-borne disease that is caused by the spirochete bacteria, *Borrelia burgdorferi*. The eco-physiology labs (6, 7) will focus on a variety of physiological assays using passerine birds as the model organism. The microscopy and histology labs (5, 10) will examine tissues from livestock to test if they are infected with various parasites. Lab 8 is a seminar where former Master and PhD students in parasitology talk about how their Master degree in Parasitology helped them with their careers.

Contenu:

Lab 01 – Basic lab skills: pipetting, weighing, and estimating protein concentration using the Bradford assay (Room D011)
Lab02 – Ticks collection in the area around University
Lab03 – DNA extraction and DNA quantification (Room D011)
Lab04 – PCR and gel electrophoresis (Room D011)
Lab05 – Introduction to microscopy: liver dissection (sheep or goat) to isolate *Fasciola hepatica*. Utilisation of the microtome, tissue collection and coloration
Lab06 – Capture and manipulation of birds (sparrows); biometrical measurements, blood sampling
Lab07 – Analysis of the samples previously collected at the Papillorama: colorimetric tests, HPLC
Lab08 – Seminars of former Master and PhD parasitology students (Room A017)
Lab09 – Introduction to immunological methods: ELISA (Room D011)
Lab10 – Microscopy and histology

Forme de l'évaluation:

Contrôle Continu : quizzes, homework, lab book, final exam

Documentation:

Written explanations for each lab will be made available to the students via email or on Claroline.

Pré-requis:

None

Forme de l'enseignement:

Practical courses. Teaching will take place in the laboratory (generally room D011).

(*) Cette matière est combinée avec d'autres matières pour l'évaluation