

## RESEARCH CLINIC

### General information

Supervisor:	Peter Houben
Title of clinic:	Testing soil microbial activity (Literature review, and application in the LUC Science Lab)
Number of students:	One. Activities can be combined and coordinated with the "Soil description" research clinic.
Major (if applicable and approved by the Major Convener):	EES, GPH
(Pre)requisites (if applicable):	Experience with lab analytical procedures

### Research context

Understanding relationships between classic physical and chemical soil parameters and the residing soil microbiome are a developing field in ecosystem sciences. This research clinic explores the opportunities to conduct own tests characterizing microbial mass and activity of soil samples in the LUC Science Lab. Student work includes to summarize given standard methods in the form of a literature review. The review is basic to decide on and test methodological applications (plate reader, spectrophotometry) that can be used for research and teaching in the LUC Science Lab.

### Students' tasks and activities

*Please specify the tasks and activities, timeline, the learning aims and how they are assessed, i.e. what the deliverables will be.*

- (A) Literature review - 6 weeks - (PRISMA concept) - ASMT: 40% - clarification of options for microbial analyses at LUC
- (B) Application of standard procedures (e.g., FDA; enzyme activity, respiration) using LUC Lab facilities - 6 weeks - ASMT: 40%
- (C) Evaluation report (lab testing) - ASMT: (20%)