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Microbial ecology (3BL2238)

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

BINDSCHEDLER Saskia, JUNIER Pilar

Contenu

This course will cover topics linking microbial ecology to sustainable agriculture. It will be split into two sections:

Theoretical lectures, exploring the following concepts: Why microbiology?
Microbiomes and microbiota
What is the soil microbiome?
Brief overview of the methods to study microbiomes and microbes

Practical work exploring wcosystem services provided by the soil microbiome focusing on different study cases with the goal of:
Understanding the background and current status
Developing a novel strategy involving microbiology
Presenting this strategy in a document that can be understood by practitioners

Forme de l'évaluation

The evaluation of this teaching is based on a graded continuous assessment, consisting of the following elements:
- Critical analysis of the definition provided by ChatGPT of the problem for each study case (max 1000 words) (25%). Deadline: 15.04.2024.
- Presentation of the case studies (50%). Presentations on: 13 and 27.05.2024.
- Fact sheet explaining the problem and your proposed solution (accessible to a practitioner) (25%). Deadline: 27.05.2024.

Modalités de rattrapage

In case of a grade below the pass grade (4), the student should contact the teachers to fix the topic of a 2000-words essay to be handed two weeks before the end of the following exam session.

Documentation

Review articles will be provided to the students and specific scientific articles will be discussed during the lectures.

Pré-requis

Basic concepts in microbiology of a Bachelor level

Forme de l'enseignement

Lectures, seminars, practical work, and discussion of scientific articles

Objectifs d'apprentissage

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

- Interpret recent scientific information in the field
- Illustrate methods discussed in the theoretical lectures for the accomplishment of a scientific project.
- Discuss current topics in microbial ecology in the context of sustainable agriculture
- Identify a scientific goal
- Develop a research project
- Provide critical feedback in the projects of peers
- Establish a scientific hypothesis
- Outline a research question on the topic

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Compétences transférables

- Explain a scientific question
- Translate theoretical knowledge into practice
- Review scientific literature
- Invent a novel idea