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Microbiome applications (3BL2295)

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

Prof. Daniel Croll

Contenu

This course provides an introduction to microbiome sciences with the main focus on plant-associated microbial communities, their functions and applications.

1. Fundamentals of microbiomes
2. Practical considerations for designing and analyzing microbiomes
3. Critically evaluate recent microbiome literature
4. Elaborate practical applications of microbiome science

Forme de l'évaluation

The evaluation is based on the following continuous assessment elements:

- Active contribution to the literature review (10%)
- Critical evaluation of the microbiome practical (20%)
- Discussion contributions (10%)
- Microbiome application proposal presentation (20%)
- Elaboration of a microbiome application proposal (40%)

Modalités de rattrapage

If the final mark is insufficient and results in a failure, the student will have to prepare one critical essay (3000 words) on one of the topics discussed during the course. The topic will be fixed by the lecturer. The essay should be handed in two weeks before the exam session for which a second attempt is made. In addition, the student will pass an oral exam of 15' scheduled during the exam session. A failure to hand in the critical essay or an unjustified absence from the oral exam constitutes a second and definite failure from the course.

Documentation

Slides, articles and practical documentation will be made available through Moodle.

Forme de l'enseignement

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

Objectifs d'apprentissage

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

- Interpret recent scientific information in the field
- Develop a research application project
- Summarize key messages
- Discuss current topics in microbiome sciences
- Present scientific articles
- Compare research methodology
- Provide critical feedback to peers
- Analyse evidence presented in the literature

Compétences transférables

- Review scientific literature
- Translate theoretical knowledge into practice

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- Present effectively to peers
- Write a scientific text
- Explain complex findings