

**EEOB 8896.12**

# Microbiome meta-analysis

Instructors:

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Credit Hours: 2 (2<sup>nd</sup> 7 weeks)

Meeting times TBA

Microorganisms drive several fundamental physical, chemical and biological phenomena. We usually focus on single or few microbial species, while mechanisms and processes are often driven by communities of microbes. Isolation and cultivation of entire communities is virtually impossible, so current research relies on sophisticated sequencing and bioinformatics methods to uncover microbial communities. Metabarcoding allows us to explore the diversity of microbial communities.

In this course, students will explore the metabarcoding microbiome literature, develop a research question, and conduct a meta-analysis of metabarcoding data. Students will retrieve the data from public repositories, build a database, and analyze the database with state-of-the-art bioinformatics techniques. The goal of the seminar will be to focus in depth on a question in the metabarcoding microbiome literature, analyze the question, and submit a manuscript for peer-review.

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