

COURSE DETAIL

MICROBIAL ECOLOGY

Country

Netherlands

Host Institution

Utrecht University

Program(s)

Utrecht University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

110

UCEAP Course Suffix**UCEAP Official Title**

MICROBIAL ECOLOGY

UCEAP Transcript Title

MICROBIAL ECOLOGY

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

The course is designed to cover the full spectrum of microbial ecology. Lectures and associated lab practical sessions therefore focus on general issues in microbial ecology as well as specific microbial groups and microbe-driven processes. Specific topics that are covered include: the history of microbial ecology; patterns of microbial diversity and diversity/function relationships; linking microbial identity with function; microbiology of the soil and the rhizosphere; plant disease and plant disease protection; microbial ecology of the C-cycle; decomposition of recalcitrant organic matter; bioremediation; microbial ecology of the N-cycle; microbial ecology of the S-cycle; microbial diversity of aquatic habitats; microbial diversity of extreme habitats; human microbiology and the human microbiome; microbial genomics; metagenomics; fungal ecology and bacteria-fungal interactions; ecology and evolution of microbial symbioses; microbial biotechnology; microbes in trophic interactions and food webs. Most course days are half theoretical and half practical. A number of experiments are conducted during the course, which are analyzed at different times throughout the course. One week is also devoted to a computer practical designed to teach about handling and analyzing high throughput DNA sequencing data. The course also contains a number of guest lectures from experts in specific hot topics in microbial ecology. It is recommended that students have taken several previous ecology and/or microbiology courses prior to enrolling in this course.

Language(s) of Instruction

English

Host Institution Course Number

B-B3MECO15

Host Institution Course Title

MICROBIAL ECOLOGY

Host Institution Campus

Utrecht University

Host Institution Faculty

Science

Host Institution Degree

Host Institution Department

Biology

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