Module Name
Tutorial Ecology, Evolution and Environment

Type of Module	**Module Code**
o Basic Module	Ecology Tutorial

Identification Number	**Workload**	**Credit Points**	**Term**	**Offered Every**	**Start**	**Duration**
MN-B-E 3	180 h	6 CP	1st term of studying	Winter term	Winter term only	1 term

1	**Course Types**	**Contact Time**	**Private Study**	**Planned Group Size**
	Tutorial	60 h	120 h	12 students

2 Module Objectives and Skills to be Acquired

Students who successfully completed this module

- have acquired practical skills in ecological experimentation and data collection.
- can analyze data from field and laboratory studies in a wide range of different ecological and evolutionary fields.
- have acquired knowledge on current aspects of evolution in ecological systems and its relationships to the aquatic, terrestrial and chemical environment.
- can solve problems and develop strategies to answer questions related to environmental aspects of ecology and evolution.

3 Module Content

- Aquatic ecology in the anthropocene (Example: River Rhine)
- Terrestrial ecology
- Microbial ecology
- Chemical ecology (e.g. Environmental chemistry, HPLC, chemical communication)
- Abiotic gradients in limnology
- Population ecology and genetics
- Population genomics and ecological genomics (analysis of genome data)
- Community ecology (multivariate Statistics)
- Phylogeny and ecology (community genetics, phylogenomics and environmental transcriptomics)

4 Teaching Methods

- Project work; Bioinformatic exercises; Excursions; Training on presentation techniques

5 Prerequisites (for the Module)

Enrollment in the Master´s degree course “Biological Sciences”; Simultaneous participation in the lecture and seminar “Ecology, Evolution and Environment”

6	**Type of Examination** Oral presentation (100 % of the total module mark)
7	**Credits Awarded** Regular and active participation; oral presentation at least “sufficient”
8	**Compatibility with other Curricula*** None
9	**Proportion of Final Grade** 7.5 %
10	**Module Coordinator** Prof. Dr. Hartmut Arndt, phone 470 3100, e-mail: teach-ecology@uni-koeln.de
11	**Further Information** **Participating faculty**: Prof. Dr. H. Arndt, Prof. Dr. M. Bonkowski, apl. Prof. Dr. J. Borcherding, Prof. Dr. E. von Elert, PD Dr. K. Lampert, Dr. F. Nitsche, JProf. Dr. A.-M. Waldvogel **Literature:** • Information about textbooks and other reading material will be given on the ILIAS representation of the course (see https://www.ilias.uni-koeln.de/ilias/goto_uk_cat_2815610.html) **General time schedule:** Weeks 1-14: Tutorials and oral presentations (starting at 2:00 p.m. at different dates, more details will be given in the introduction to the module). **Introduction to the module:** October 10, 2022 at 2:00 p.m. (further information see ILIAS folder).