Ecology, Evolution and Environment - Theory and Methods					
Identification number	Workload	Credit points	Term of studying	Frequency of occurence	Duration
MN-B-E 1	180 h	6 CP	1st or higher term of studying	Winter term	15 weeks

1	Type of lessons	Contact times	Self-study times	Intended group size*
	Lectures	49 h	131 h	approx. 50-70

2 Aims of the module and acquired skills

Students who successfully completed this module …

- have acquired detailed knowledge on ecological theory and methods as well as skills on analysis of experimental data from field and laboratory studies.
- 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 Contents of the module

- Introduction to ecological theory and methods
- Molecular ecology
- Chemical ecology
- Ecological stoichiometry
- Evolution of species
- Micro- and macroevolution
- Non-linear interaction in biological systems
- Ecosystem dynamics
- Anthropogenic impact on ecosystems

4 Teaching/Learning methods

- Lectures

5 Requirements for participation

Enrollment in the Master´s degree course “Biological Sciences”

Additional academic requirements

The knowledge of ecology on the level of general biology text books (*e.g.* Ecology: From Idividuals to Ecosystems by Begon & Townsend or Community Ecology by Verhoef & Morin) is required.

6 Type of module examinations

Two hours written examination about topics of the lectures (100 % of the total module mark)

7 Requisites for the allocation of credits

Written examination at least “sufficient”

8 Compatibility with other Curricula*

None

9	Significance of the module mark for the overall grade 7.5 % of the overall grade
10	Module coordinator Prof. Dr. Hartmut Arndt, phone 470 3100, e-mail: teach-ecology@uni-koeln.de
11	Additional 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, Dr. A. Scherwaß, JProf. Dr. A.-M. Waldvogel Literature: • Information on recommended textbooks and other reading material will be given on the ILIAS representation of the course (https://www.ilias.uni-koeln.de/ilias/goto_uk_crs_3516842.html) General time schedule: Weeks 1-14: Mon. from 10:00 to 10:45 a.m., Wed. from 10:00 to 11:30 a.m. and Fri. from 12:00 to 12:45 a.m.; Week 15 (Mon-Fri): Preparation for the written examination Introduction to the module: November 02, 2020 at 10:00 a.m., online (further information/link will be sent to your Smail-Account); for preparation to the module before this introduction see ILIAS link under literature. Written examination: March 01, 2021, second/supplementary examination March 29, 2021; the latter date may vary if students and module coordinator agree. More details will be given at the beginning of the module.

* Depending on how many students from other subject areas (and if indicated also from other master´s degree courses, see 5) choose this module.