Module Name

Ecology, Evolution and Environment - Theory and Methods

Type of Module	**Module Code**
Advanced Module	AM-B-E 1

Identification Number	**Workload**	**Credit Points**	**Term**	**Offered Every**	**Start**	**Duration**
MN-B-E 1	180 Hours	6 CP	1. – 3. Semester	WiSe	Winter Term Only	1 Semester

1	**Course Types**	**Contact Time**	**Private Study**	**Planned Group Size**
	a) Lecture	49 h	131 h	50-70 Students

2 Module Objectives and Skills to be Acquired

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 Module Content

- 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 Methods

- Lectures

5 Prerequisites (for the Module)

Formally: none

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 examination

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

7 Credits Awarded

Written examination at least “sufficient”

8 Compatibility with other Curricula

None

9	**Proportion of Final Grade** 6/114
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, 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 **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