

Module Name Tutorial Ecology, Evolution and Environment						
Type of Module ○ Basic Module				Module Code Ecology Tutorial		
Identification Number MN-B-E 3	Workload 180 h	Credit Points 6 CP	Term 1 st term of studying	Offered Every Winter term	Start Winter term only	Duration 1 term
1	Course Types Tutorial		Contact Time 60 h		Private Study 120 h	
2	Module Objectives and Skills to be Acquired Students who successfully completed this module <ul style="list-style-type: none"> • 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 a broad knowledge of ecological systems and understand the influence of biotic and abiotic environments on ecosystem state, stability and evolution. • can plan and optimize ecological experiments. • have gained practice in presenting and evaluating scientific data and studies. 					
3	Module Content <ul style="list-style-type: none"> • Food web structure and ecology of the River Rhine • Methods of the analysis of terrestrial food webs • Analysis of interactions within the microbial web • Methods of environmental chemistry, HPLC and chemical communication • Analysis of abiotic and biotic parameters in aquatic environments • Data production and analyses in population genetics (DNA extraction, PCR, fragment size analysis) • Phylogenetic analysis (Sanger sequencing, alignments, tree building, BLAST search) • Introduction to methods to analyze community ecology (e.g. multivariate statistics) • Community genetics, phylogenomics and environmental transcriptomics 					
4	Teaching Methods <ul style="list-style-type: none"> • Interactive tutorials; Project work; Bioinformatic exercises; Excursions; Training on presentation techniques in oral and written form 					
5	Prerequisites (for the Module) Enrollment in the Master's degree course "Master of Science in Ecology, Evolution and Environment"; Simultaneous participation in the lecture and seminar module "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. Michael Bonkowski, phone 470 31052, e-mail: teach-ecology@uni-koeln.de
11	Further Information Participating faculty: Prof. Dr. M. Bonkowski, Prof. Dr. E. von Elert, Prof. Dr. P. Fink, Dr. M. Ilic, PD Dr. K. Lampert, Dr. F. Nitsche, Dr. H. Öztoprak, Dr. A. Scherwaß Literature: <ul style="list-style-type: none">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 at the introduction to the module). Introduction to the module: October 09, 2023 at 10:00 in room -1.005