

Block course „Sampling and Data Analysis in Fisheries Science“

Instructor: Prof. Dr. Robert Arlinghaus

Schedule: August, 31 – September, 19, 2020. Full working days with presence during the working weeks 36 and 37 (Monday to Friday).

Localities: In the calendar week 36 (Aug 31 to Sept 4) we will do several field campaigns to rivers and lake, a few nights will be spent outside of Berlin (on own costs, travel organized by instructor for free). Calendar week 37 will be at IGB and the calendar week 37 is for finishing up the report (you can work wherever you want then).

Computers: For the laboratory work, it would be good if you bring laptops with the programs Excel and R installed.

Content: The goal of this practical block course is to learn how to sample freshwater fish communities in different habitats, identify species and statistically analyse and model data against pre-defined questions. The analysis will be based partly on data collected during the course and partly included analysis of raw data collected previously or in general projects of the working group of Robert Arlinghaus (in particular www.baggersee-forschung.de). The course will be a full two-week course where key details of conducting and analysing a field study related to fish and fisheries ecology will be learned. This will prepare the student for assessments of fish community structure in rivers and lakes and of related fisheries questions. The precise location of the field sites is still not fully settled. Interaction with students on these details will happen through email among the people subscribed to the list.

Grading: The course will be graded based on a scientific report that answers a set of research questions. Students will form groups tasked with specific questions and these subgroups will be responsible for writing up the respective sections and presenting the results orally. In addition, students will be part of the larger team and are expected to help out each other as needed. There is also a joint component of the overall report (e.g., introduction, overall conclusion, formatting), so that the ultimate grade of the course will be based on 25% overall report, 75% individual contribution at the subgroup level. The document is due October, 12, thus there is time for completion after the block course.

Maximum number of students: optimally 8

Minimum number of students: 5

Possible Research Topics for Subgroups:

1. Impact of habitat type (backwater vs. main channel) on fish assemblage composition in River Spree
2. Impact of sampling gear (littoral gill nets and electrofishing) on fish community metrics in gravel pits
3. Impact of stocking on fish abundance – comparing models and data
4. Assessment of habitat structure in gravel pit lakes
5. Impact of angler ground bait and experience on angling catches in coarse fishing

Note that for question 5 we need enough people with varying degree of fishing experience in angling for coarse fish (Weissfischangeln). Please provide your experience level below.

Student list with indication of thematic interest

Name	Matr. No and email (readable)	Experience with coarse fish angling (0 = none, 1 = a bit, 2 expert)	Preferred topic (1 to 5 from list above)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

Supplemental list (to substitute drop offs from the fixed list by lottery)

9.			
10.			
11.			
12.			