

Course description	
Course	Research Planning
Department	Department of Ecology
Language	English
Nature	Mandatory
Year/semester	1st year, winter-term
Credits (ECTS)	4
Lectures (hour/semester)	12
Plenary lectures (hour/semester)	
Practicals (hour/semester)	12
Responsible teacher	Dr. Kis János
Teacher(s)	Dr. Kis János
Prerequisites	
Learning outcome (include skills and competencies, if any)	
Basic concepts and skills in (1) asking research questions and arguing why these questions are important to answer (2) planning research studies such as observational studies and experiments, design sampling and collect data suitable to statistical analyses. (3) Acquire a critical view on study design.	
Outcome assessment	
Each student will give a talk of 10' followed by a 5' group discussion on the student's research plan related her/his PhD topic. The exam follows the protocol of scientific conferences.	
Weekly schedule of lectures and practicals	
WEEK	Lecture topics
Week 1	What is science? Research questions and hypotheses testing.
Week 2	Measuring variables - measurement errors and repeatability. Data sampling designs. Validity.
Week 3	Research approaches: observational studies, experiments, meta-analyses and formal models.

WEEK	Practical topics
Week 1	What is science? Research questions and hypotheses testing.
Week 2	Measuring variables - measurement errors and repeatability. Data sampling designs. Validity.
Week 3	Research approaches: observational studies, experiments, meta-analyses and formal models.
Recommended literature	
Note(s)	
Practicals will go parallel to the lectures. Students shall formulate their research questions closely related to their PhD topics then develop a plan to answer these questions.	