

Teaching portfolio

Name	Simon Bahrndorff
Date of birth	June 14 th 1978
Current position	Associate Professor
Institution	Aalborg University Department of Chemistry and Bioscience Section of Biology and Environmental Science

A. Teaching experiences

Teaching during my PhD study at the Aarhus University

- Held a two hour lecture in Population Biology
- In charge of Population Biology tutorial lessons
- In charge of Population Ecology tutorial lessons

Teaching during my post doc period at Technical University of Denmark

- Held a two hour lecture in Animal production, health and welfare (Aarhus University)
- Supervisor for two students doing an ad hoc 10 ECTS project at Aarhus University, (Title “The effect of temperature and density on locomotor activity in the housefly, *Musca domestica* (Diptera: Muscidae)”; Title: “The effects of mating and social deprivation on activity in the house fly (*Musca domestica*)”)
- Supervisor for a undergraduate student at Simon Fraser University, Title: “Characterization of the vector competence of the housefly, *Musca domestica*, for *Campylobacter* spp. using a *Campylobacter jejuni* GFP strain and suppressive subtractive hybridization”

Teaching during my assistant professorship at Aalborg University

- Held a two hour lecture in “Climate Change and Energy Law” (10 ECTS) at Aarhus University, Department of Law.
- Held a two hour lecture in “Zoology” (5 ECTS).
- Teacher in “Global Change Biology” (5 ECTS)
- Supervisor in “Microbial Ecology” (15 ECTS) (2014, 3 students)
- Supervisor in “Field Biology” (10 ECTS) (2013, 6 students)
- Supervisor in “Population Biology” (15 ECTS) (2014, 5 students)
- Supervisor in “Experimental Ecology and Ecotoxicology” (2014 and 2015 with a total number of 36 students) (15 ECTS)
- Supervisor for a master student (2012)

Teaching during my associate professorship at Aalborg University

Courses: Zoology (3rd semester), Global Change Biology (7th semester), Danske Naturtyper (8th semester), Marine Biology (6th semester)

Project work: Field Biology (1st semester), Experimental Biology (2nd semester), Microbial Ecology (3rd semester), Experimental Ecology and Ecotoxicology (4th semester), Populationbiology (5th semester), Molecularbiology (7th semester), Naturforvaltning (8th semester).

Teaching material

My current teaching is mainly focused with project groups where I largely use an experimental approach combined together with extensive literature search. The students are allowed to use already established experimental approaches, but also develop new methods on their own.

Teaching methods

I like the students to develop their own project within the timeframes of the given problem, but find it helpful to help them in designing the experimental work so that the outcome is successful. I therefore also ask the students to prepare a detailed project description before carrying out laboratory work. I use this approach because it acts as a strong motivating factor for the student to be involved in the development of the project and laboratory work. I try to be as much in the labs together with the students as possible, which allows the students to grow. The students are asked to be independent, but can always ask questions and there are no “stupid” questions. This gives also a friendly atmosphere where the students can learn. I would like the students to find the relevant literature, but I also like to help them with this and motivate them in the process.

B. Relationship between research and teaching/project supervision

Background and field of interest

Academic background and research career:

- Cand. Scient. from Aarhus University and carried out at LaTrobe University, Melbourne, Australia within adaptation and species specific responses to polluted sediments.
- Ph.D. from Aarhus University within physiological and evolutionary adaptation to environmental stress in soil ecosystems.

Research topics:

- Stress biology
- Evolution
- Ecophysiology

Preferred teaching area:

- Global Change Biology
- Experimental Ecology and Ecotoxicology

Current teaching areas:

- Projects in ecology and ecotoxicology which includes testing the importance of behavioural traits in thermal adaptation.

Assessment of the correlation between teaching, project supervision and research activities

My research is within the field of stress biology and ecophysiology. I use a multidisciplinary approach which includes areas such as ecology, physiology and evolution and it is possible for me to include my own research in all the courses that I am involved in. Especially the projects contain elements which can be useful to my research. When relevant I therefore also like to involve other associate professors with expertise in evolution and stress biology from different sections within the department to strengthen the multidisciplinary in the projects.

C. Institutional framework for teaching (opportunities and challenges)

Traditions and academic points of view within my research area

I like to take an experimental approach in my teaching, where I in my project work use both mechanistic and evolutionary approaches. Stress biology research covers many different areas including physiology, evolution, use of molecular tools, vector biology and microbiology. This is done by cooperating with different academic personal at both Aalborg University and other Universities.

Target groups for teaching

I teach mainly biology students where I use different model organisms and experimental approaches. It is important for me that my approaches will give the students the necessary knowledge related to the use of relevant techniques, experimental designing, data analysis and obtaining relevant and area specific literature.

Organizational framework for teaching

I have a close collaboration together with the other scientific personal at the department and in many instances we therefore co-supervise groups together. I believe that this creates a dynamic environment although the time allocated to this can be a challenge. I have an individual post doc grant from The Danish Council for Independent Research, which puts some limitation to my time for teaching.

Physical and practical framework

The project groups perform their experiments in our lab where we have the equipment and facilities to carry out relevant experiments and with planning it is possible to have many students in the laboratory at the same time.

Assessment of opportunities and challenges within teaching and supervision

I enjoy supervising the project groups because it allows me to combine my teaching responsibilities with my research. Recently I have become more involved in theoretical courses and will be in charge of my own courses in near future. This will also be beneficial for my future

career in academia. The challenge at the moment is to balance teaching and research and obtain funding for my future appointment at the department.

D. Teaching and supervision and my personal style as a teacher

I like to motivate my students as I believe this will give them the best learning environment and process. I find that this happens almost automatically during project work, but it is more challenging during lectures. I try to include questions and relevant examples in my lectures, which can assist the learning process. This is in agreement with the problem based learning theory applied at Aalborg University.

E. Pedagogic action plan

I am currently attending the “University Pedagogy for Assistant Professors” (2013-2015) at Aalborg University where I so far have participated in the following courses:

- Good lectures in large classrooms
- Infusing everyday teaching with the ideas of PBL to motivate learners

I will attend the course “Flipped courses in higher education” in autumn 2014.

Attending the courses has so far given me useful tools which I can use in my teaching.