

Teaching Portfolio

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Educational Training

Lecture Training Program at the University of Southern Denmark (2018 – 2019; 10 ECTS)

During the course I participated in the following courses:

Effective Feedback and Feedforward
Helping Students Understand Assessment
Setting up your course in Blackboard

Teaching Experience

Over the past 15 years I have been a teacher / instructor in a number of subjects / courses at different academic institutions. This teaching has included lectures, laboratory and fieldwork teaching. For the last two years I have been responsible for the Masters course, 'Field course in Marine Biology' (5 ECTS) for approx. 30 students.

2018 - present: Course leader, Field Course in Marine Biology (Masters course; University of Southern Denmark, Denmark)

2016 - 2017: Lecturer in Biogeochemistry (MarMic, MPI, Bremen, Germany)

2012 – 2015: Lab leader, Toxicology - HPLC, (University of Southern Denmark, Denmark)

2011: Guest lecturer, Marine Microbiology (University of Massachusetts Dartmouth, USA)

2005: Teaching Assistant, Basic Chemistry (University of East Anglia, UK)

2004: Teaching Assistant, Environmental Chemistry (University of East Anglia, UK)

2004: Teaching Assistant, Geochemical Cycling (University of East Anglia, UK)

Supervision

Current Supervision

Sarah Weber (Postdoctoral Researcher; University of Southern Denmark, 2020-2022)

Herdís Steinsdóttir (PhD (co-supervisor); University of Southern Denmark, 2018-2021)

Anders Barnewitz (BSc; Bachelors Project, University of Southern Denmark, 2020)

Past Supervision

Katharina Kitzinger (PhD (co-supervisor); MPI Bremen & University of Vienna, 2015-2019)

Anders Barnewitz (BSc; Independent Study Project, University of Southern Denmark, 2019)

Chawalit Charoenpong (MSc; University of Massachusetts Dartmouth 2010-2013)

Elizabeth Lee (BSc; University of Massachusetts Dartmouth Summer project 2011)

Teaching Philosophy

It is essential that my teaching practices are motivational for the students and also gets them to actively participate in the learning process. This may come in different forms, lectures to project work, but throughout I endeavor to implement elements of research-based teaching, as shown in the four quadrants presented by Healey (2000). Lectures remain a practical solution for large bachelor level classes, and here I incorporate the latest research in the field (as a supplement to any textbook), by integrating scientific literature and applying case-based teaching on research results. Activation of the students is challenging during lecturing, and therefore I try to use some form of participation at least every 20 to 30 minutes, for example, polling methods or think-pair-share in smaller classes, which helps to activate the whole class, instead of just the same few raising their hands.

I have witnessed first-hand that through laboratory teaching and field courses that students can be trained in the scientific process, as depicted in the research orientated and research-based quadrants of Healey (2000). Initial classes tend to be based on the 'cookbook' type lab exercise focusing on the students learning techniques and inquiry skills. More advanced courses though focus on problem solving approaches, these kinds of exercises stimulate students to 'think about what they are doing', work independently and repeat techniques that they have previously used. Furthermore, this provides the students with self-confidence that they can solve a problem independently, using the knowledge that they have acquired. Project work only advances these skills, where questions can be provided or formulated and subsequently answered through experiments, analyses and calculations, with outcomes critically assessed in light of current scientific literature and finally reported. Throughout, the students are acting as participants in the research process, which allows the students to build the necessary foundations to independently carry out scientific work. During question / hypothesis formulation and report writing, approaches such as peer feedback (e.g. PeerGrade) can be beneficial to engage the students and get them to think critically as they assess both their fellow students work and their own.

Combining these forms of teaching also gives me the ability to activate students with different backgrounds who have different ways of learning, and I constantly seek to develop my teaching with this goal in mind. Wherever possible I include examples from my own and colleague's research, to highlight on-going research in the field, especially that taking place within the department the students are studying in. Additionally, this gives the students an insight into my own research, and thereby the person 'behind' the teacher, which can help to create a relationship between the students and the teacher.