

Teaching portfolio

1. Teaching CV: A list of any lecturing and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD) as well as any external examiner tasks.

Teaching during my MSc study at Royal Veterinary and Agricultural University, KVL (now Copenhagen University):•Instructor in Botany (Plantekendskab), Dept. of Botany, spring semester 1985 and 1986. Teaching during my employment as research assistant at Royal Veterinary and Agricultural University, KVL (now Copenhagen University):•Instructor and laboratory responsible for the laboratory course Bakteriernes fysiologi og genetik, Dept. of Microbiology, KVL, 1990. The course was running whole semester as 4 classroom teachings. Teaching during my PhD study at Royal Veterinary and Agricultural University, KVL (now Copenhagen University):•Lectures in the course Molecular and Physiological Plant Pathology, Dept. of Plant Biology, KVL, 1995, 1996, 1997. •Co-supervisor for three MSc student projects, two of which resulted in publications where the students were included in the list of authors. Teaching during my assistant professorship at Royal Veterinary and Agricultural University, KVL (now Copenhagen University):•Lectures: PCR techniques for diagnostics 2000, 2001. •Teacher in the Laboratory part in the course Almen Plantepatologi (laboratory exercises), 2000, 2001. •Lectures and theoretical exercises in the course Biological Control of Pests and Diseases of Crop Plants, 1998, 1999, 2000, 2001. •Initiated a PhD course and was course responsible for a Ph.D. course PCR based techniques for characterization of filamentous fungi (15 ECTS), 1999-2005. •Co-supervisor for a BSc student project, which resulted in a publication. Teaching during my associate professorship at Copenhagen University:•Supervisor for project groups in the course Biological Control of Pests and Diseases of Crop Plants 2002, 2004. •Supervisor for project groups in the course Advanced Microbiology, 2005, 2006. •Supervisor for project groups in the M.Sc. course Biological Control 2006. •Teacher in the MSc course Advanced Microbiology, 2005 •Teacher in the BSc course Microbial Interactions 2006, 2007. •Teacher in the MSc course Biological Control, 2006. •Teacher in the PhD course Advanced Plant Pathology, 2003. •Teacher in the PhD course Advanced Plant Microbe Interactions, 2004. •Teacher in the PhD course: 20th Nordic Post-Graduate Course in Plant Pathology 2004. •Teacher (and national representative) in a NOVA PhD course: Diagnostics in Plant Pathology, June 17-24., 2006 Norway. •Course responsible for a PhD course PCR based techniques for characterization of filamentous fungi (15 ECTS), 1999-2005. •Course responsible for a PhD course: Advanced methods in plant pathology (6 ECTS), 2005-2007. •Supervisor for two BSc students •Supervisor for a MSc student, and co-supervisor for two MSc students •Co-supervisor for 4 PhD students Teaching during my associate professorship at the Technical University of Denmark: •Teacher in the MSc course Enzyme Discovery (5 ECTS), 2008 •Project supervisor for a PhD student and assisting in supervision of MSc students Teaching during my associate professorship at Aalborg University, Denmark: High school students: •Responsible for the Study Practice where students from high schools participate in a 3 day program which includes lectures and a mini-project with laboratory experiments. •Visits from several high school classes, including Talent programs and Bio-Olympics, where the students are offered laboratory exercises and connecting lectures. •Visiting high schools during Naturvidenskabsfestival, Forsknings Døgn, and "Fascination of Plants Day" •Supervision of SRP project students from different high schools. Sustainable Biotechnology BSc: •Project responsible and project group supervisor teacher in Cases in Biological Production (5 ECTS), 2011-2018 •Project responsible and project group supervisor in Biological Production (10 ECTS), 2011-2018 •Course co-responsible and teacher for Applied Biodiversity (5 ECTS) 2012 •Course co-responsible and teacher for Microbiological Processes (5 ECTS) 2012 •Teacher in Applied Microbiological Biodiversity (10 ECTS), 2014-2018 •Teacher in Biochemistry (10 ECTS) 2012 •Supervision of BSc students in Sustainable Biotechnology MSc: •Project co-responsible and project group supervisor in Advanced Microbiological Production (15 ECTS), 2010-2021 •Course co-responsible and teacher in Biological Production Processes (5 ECTS), 2010-2021 •Course responsible and teacher in Microbiological Discovery (5 ECTS), 2011-2022 •Teacher in Fungal Biotechnology (5 ECTS), 2011- 2017 •Supervision of MSc students, Sustainable Biotechnology PhD: Course responsible, teacher and project group supervisor for Biorefineries for the production of fuels, chemicals and feed (4 ECTS), 2009-2016. •Supervision of PhD students (7 as main supervisor, 8 as co-supervisor), Techno-Anthropology BSc: •Project group supervisor in Mennesket og Teknologien (10 ECTS) 2011-2016 •Project responsible and project group supervisor in Teknologi, Innovation og Etik (15 ECTS), 2012-2016 •Course responsible and teacher in Cases i Anvendt Teknologi (5 ECTS) 2011-2016 •Course responsible and teacher in Teknologi på Mikroplan (5 ECTS) 2012-2014 •Lectures in Teknologi og Etik (5 ECTS) 2012 •Lectures in Teknovidenskab (5 ECTS) 2013 •Teacher in Teknologi i et Makroperspektiv: fra innovation til industri (5 ECTS) 2013-2016, Techno-Anthropology MSc: •Project group supervisor in "Expert cultures and organisations in Innovative Knowledge Production" 2012-2016 •Course responsible and teacher in Technology for Humanists (5 ECTS) 2012-2016 •Teacher in Responsible and Innovative Knowledge Production (5 ECTS) 2012-2013 •Lectures in the MSc course "Product Development" (5 ECTS) 2013-16, Course responsible for Bioresources and Biorefineries 2023-, •Supervision of BSc and MSc students (in total >90), Supervision of 5., 7. and 8. semester student groups at Biotechnology, Aalborg, Censoring at other Universities: •Appointed member of the Agricultural and Engineering censoring boards •BSc and MSc projects at Copenhagen University KU-PLN and KU-IFRO, 2011- (>60) •BSc and MSc projects at the Technical University of Denmark, DTU, 2015- (>30) •Written exam in Bioenergy KU-PLN, 2011-2017 •Assessment committee of 17 PhD students.

2. Study administration: A list of any study administration tasks, e.g. study board membership, head of studies or semester or course coordinator, accreditation, etc.

I have been extensively involved in building up the new education in Sustainable Biotechnology at Aalborg University and formulating the descriptions of the courses in the study curriculum that I am responsible for as well as commented on several of the other course contents, regarding the BSc and the MSc education. In addition, I am member of the study board of the Techno-anthropology education at Aalborg University and have been actively involved in the build-up of this education as well from its start in 2011 and with the revision of the education 2015-16. I have been actively building up in total 4 different PhD courses both during my employment as Associate Professor at Copenhagen University and at Aalborg University (two each place). I have extensively been involved in building up the study curriculum descriptions for the courses of the BSc, MSc and PhD in Sustainable Biotechnology for which I am course responsible

- Course and project responsible for numerous courses at both Sustainable Biotechnology until 2023 and Techno-anthropology until 2019.
- Semester-coordinator of BSc 1st, 2nd, 7nd, 9nd and 10th semester at Sustainable Biotechnology until June 2023
- Member of the Techno-anthropology study board (2011-2019)

3. University pedagogy qualifications: A list of any completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc.

- “Adjunktpædagogikum” (a one-year study program in educational studies for assistant professors). Royal Veterinary and Agricultural University KVL, 2000.
- PBL-course, AAU, 2010
- Participation in learning day with IKT theme, AAU, 2010
- Course in project group exams 2012
- Member of an ERFA group that met regularly to discuss the teaching content and evaluating the teaching in Techno-anthropology during 2011-2013
- . Supervision/mentoring of 2 Assistant Professors during "Adjunktpædagogikum" 2014.

4. Other qualifications: Conference attendance, editorials, presentations, etc. relating to education, 'University Teaching Day', etc.

I have participated in "undervisnings dag", however not regularly

5. Teaching activity development and teaching materials: A list of any contributions to the development of new modules, teaching materials, study programmes, e-learning, collaboration with external business partners, etc.

I have been involved in developing a long list of new courses (refer to point 1)

6. Teaching awards you may have received or been nominated for.

Type your answer here...

7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogic development, plans for following up on feedback/evaluations from students, etc.

My teaching portfolio has been very broad, as I have been teaching on four different educations, two of them at BSc as well as MSc level. At Sustainable Biotechnology, I have been teaching in PhD courses as well as supervising PhD students and postdocs. Currently (from September 2022), I am teaching at Biotechnology in Aalborg and a course that is shared between biotechnology students in Aalborg and bioengineering students in Esbjerg. The student numbers in the two different educations have been very different, from very few (4) at BSc Sustainable Biotechnology to >90 at Techno-anthropology. Therefore I have been challenged with very different teaching methods, from standard lectures to intimate conversation-like teaching. I have extensive experience with dividing the students into smaller student groups during teaching so that they can perform group work, present their work and getting involved in active discussions even in large classes. I have extensive experience with project group supervision, where I consider my role also as coaching and trying to engage the students in taking responsibility for their own learning as well as being active group members and benefitting of the active learning style. I have also had responsibility for laboratory exercises and have built-up a mini-project laboratory course in Microbial Discovery where the students follow a main line in the experiments but work on own material and has to make their own choices throughout the semester. For the sustainable biotechnology project groups, the students most often had to do laboratory experiments and I both use standard protocols for routine experiments and develop new protocols together with the students as part of their projects. As I am very busy, I try to involve PhD students and post docs in the laboratory part of the projects, and include them in the planning. I always try to think carefully about the level (the background of the students) that I am teaching. The same topic are presented in a striking different way if it is presented as an inspiring talk for high school students or if I am teaching the techno-anthropology BSc students 1st semester in contrast to the students at the Sustainable Biotechnology education. I therefore also always try to think about

progression in a course or in courses that built upon other courses. I also believe that lectures can be improved by the use of several different "tricks", one is to pose questions to break the one-way teaching, another to play small movies and a third way is to interrupt and make small group assignments or two-and-two exercises. Also telling small anecdotes from the real life and of the research experience related to the topic can be inspiring and motivating for the students. For the project supervision, I try to engage and motivate the students. If possible (for the sustainable biotechnology students), I have tried already at the 2nd semester BSc level to relate their projects to our research. However, it is not really possible at this early stage since first time, the students were highly engaged, did a lot of experimental work but did not have the necessary background understanding of many of the details and they did not have enough time for the theoretical part including the report writing. Therefore I have realized that learning is a step wise process and the experimental part has to be adjusted in time and level to the actual students. I feel that it is better to ensure that they are challenged but not to a degree where the chance of "drowning" is too high. On the other hand, it is much more satisfactory to teach students that strive to work harder simply due to high motivation. At later stages in the education, especially MSc and BSc project, I prefer that the projects relate to my (our) research and try to convince the students of the mutual benefit if they engage themselves in the ongoing projects and the use of state-of-the-art techniques. I consider myself as an emphatic supervisor, and have often been involved in solving project group problems or have been giving extra supervision to students or individuals that needed it. I am also informal with the students and like to talk with them and try to give them the opportunity to ask all kinds of questions.

8. Any other information or comments.

For the project supervision, I try to engage and motivate the students. I have tried already at the 2nd semester BSc level to relate their projects to our research. However, it is not really possible at this early stage since first time, the students were highly engaged, did a lot of experimental work but did not have the necessary background understanding of many of the details and they did not have enough time for the theoretical part including the report writing. Therefore I have realized that learning is a step wise process and the experimental part has to be adjusted in time and level to the actual students. I feel that it is better to ensure that they are challenged but not to a degree where the chance of "drowning" is too high. On the other hand, it is much more satisfactory to teach students that strive to work harder simply due to high motivation. At later stages in the education, especially MSc and BSc project, I prefer that the projects relate to my (our) research and try to convince the students of the mutual benefit if they engage themselves in the ongoing projects and the use of state-of-the-art techniques.