

## Teaching portfolio

**1. Teaching CV: A list of teaching and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD). Please state the teaching method used (e.g. lecture, class teaching, exercises, supervision, examination, coexamination, distance teaching, internet-based teaching and evaluation of teaching). Please also indicate the language of instruction.**

I have more than 20 years of experience with university teaching. I have been involved with planning several new courses.

Eukaryotic Research Organisms 2009-2010 – BSc Course AU – Co-organizer and teacher

I was one of the organizers of a new 10 ECTS course "Eukaryotic Research Organisms" which was held for the first time in the fall of 2009 at the then Department of Molecular Biology, Aarhus University as a BSc course. This course covered the use of several different model organisms in molecular biology research. I was responsible for a part covering the soil nematode *C. elegans*. All organisms were represented with 6 lectures and 9 seminars. Since there are no *C. elegans* textbooks I compiled all the teaching material myself as well as prepared the exam for the part of the course I was responsible for. The exam was a written essay based upon a relevant research paper. I was also instructor in the course. I find that being instructor on the same course that I give lectures on is a very useful way of getting indirect feedback on how well the students understand the material covered in the lectures.

Eukaryotic Research Organisms 2011- 2017– MSc Course and Laboratory Course – Co-organizer and teacher

I was also one of the organizers and teachers when a new version of the course "Eukaryotic Research Organisms" was held in the fall of 2011. The course is now running annually as a 10 ECTS MSc course and includes an optional 5 ECTS laboratory component. Since the course is now running in one quarter (7 weeks) each organism is covered by 4 lectures and 6 seminars. The exam is an oral presentation based upon a relevant research paper. I am also instructor in the MSc course. The laboratory part of the course was running for approximately 3 weeks and the students are introduced to common *C. elegans* techniques such as genetic crosses, RNA interference, use of transgenics and GFP markers. The students also perform different experiments investigating areas such as aging and stress resistance, dauer formation, neurobiology and apoptosis (programmed cell death). Traditional molecular biology techniques such as PCR and western blotting are also part of the course. In order to emphasize proper understanding the students play an active role in designing the experiments as well as analyzing and reporting the results.

Using *C. elegans* in Biomedical Research – 2012 AU summer course for MSc and PhD Students

In the summer of 2012 I organizing a PhD / MSc course under Summer AU and MBG. The course provided a lecture series as well as practical introduction in the laboratory to using *C. elegans*. The course participants had hands on experience with popular techniques such as RNAi, genetic crosses, transgenic and GFP reporter strains. Furthermore, the course participants were able to inactivate their own gene of interest in *C. elegans* using RNAi. Thus, during the course participants were able to evaluate if *C. elegans* could be used to advance their ongoing studies. Several internationally renowned *C. elegans* researchers visited Aarhus and gave seminars as part of the course. I produced all course material.

Cell biology, Genetics and Immunology, MSc course AAU 2017-2021 - Teacher

I was teaching the cell biology part of the course.

Molecular and Cell Biology BSc Course AAU 2021- Co-organizer and teacher

Applied Molecular and Cell Biology 2022 AAU- Co-organizer and teacher

Models in Preclinical Neuroscience 2021- SDC Co-organizer and teacher

Project supervisor 2. semester "The central dogma"

BSc Project supervisor

MSc Project supervisor

PhD Project supervisor

Beskikket censor biologi

Beskikket censor kemi

Censor for 40+ MSc and BSc projects, 10+ PhD theses at AU, SDU, and KU, Umeaa Universitet, Oslo Universitet from 2007-

**2. Study/programme administration and management: Experience in programme management and coordination. A list of study administration tasks, e.g. study board membership, chair of study board, semester or course coordinator, accreditation tasks, etc. Experience in planning teaching activities. Experience in programme development. Participating in committees and commissions etc. on education issues.**

Since 2022 I have been Coordinator of the 4. semester at Department of Chemistry and Biosciences, Aalborg University.

LeadENG coordinator from the Department of Chemistry and Biosciences, Aalborg University.

**3. Formal pedagogical training: A list of completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc. Written assessment from the course in university pedagogy for assistant professors. Participation in conferences on pedagogy and didactics. Please enclose any documentation of the above, such as course certificates, references, etc**

Communications course 2022 Royal Academy of Sciences, DK

CBS Research Management Course 2019.

Course on MUS 2014.

Course on PhD supervision, Aarhus 2013.

Teaching course "Kursus i universitetspædagogik for adjunkter", Aarhus 2009.

Management course for research leaders by Learn2Lead Aarhus 2011.

Scientific Management Course at University of California San Francisco 2007,

14th training course in Experimental Aging Research sponsored by the NIA 2007,

**4. Other qualifications: Conference contributions and attendance, contributions to debates, scientific articles on pedagogical issues etc. Peer supervision, editorials, mentoring experience or other types of competence development activities.**

I have been supervisor/mentor for a junior researcher attending the "universitetspædagogikum"

**5. Pedagogical development and research: Development of new courses, teaching materials, teaching methods, examination types or other types of pedagogical development. Didactic and pedagogical research. Cooperation with external collaboration partners.**

Molecular and Cell Biology BSc Course AAU 2021- Co-organizer and teacher

Applied Molecular and Cell Biology 2022 AAU- Co-organizer and teacher

Models in Preclinical Neuroscience 2021- SDC Co-organiser and teacher

Eukaryotic Research Organisms 2011- 2017- MSc Course and Laboratory Course – Co-organizer and teacher

Using C. elegans in Biomedical Research – 2012 AU summer course for MSc and Phd Students - Organizer and teacher

**6. References on your teaching skills from superiors or colleagues. Teaching evaluations and any teaching awards received.**

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 pedagogical development, plans for following up on student feedback/evaluations, etc. Personal reflections on your own pedagogical practice, including objectives, methods and implementation. This should include an analysis and a reasoned description of your pedagogical activities in relation to your pedagogical understanding and student learning.**

## **Thoughts on the teaching method at Aalborg University (which is largely based on group-organised project work and problem-based learning)**

Type I very much enjoy teaching and I strongly believe that the teaching situation is one of the best possibilities to inspire students and ensure learning. I have been teaching at the Department of Molecular Biology and Genetics, Aarhus University from 2007-2017 and at the Department of Chemistry and Biosciences, Aalborg University since 2017. I have been proactive in the area of teaching.

In general, I use a lot of case studies in my teaching and I focus more on understanding of the underlying principles rather than memorizing a lot of material. I believe that the PBL model offers one of the best platforms available to support this approach. I think that critical and deep thinking is perhaps one of the most valuable skills that the students can learn – independent of subject matter. In the lectures I have worked on implementing a variety of different strategies to involve the students and thereby make the lectures more interesting. These are tools that I picked up from the course “Kursus i universitetspædagogik for adjunkter” that I have completed as well as from peer-supervision groups that I have participated in. I have focused on three key points: i) To break a 45 minutes lecture in four parts of approximately 10-12 minutes each in order for the students to keep their concentration on the subject and ii) to include questions to the students throughout the lecture, and finally iii) to include little questionnaires and problems for the students to solve in small groups. I have collected these questionnaires and used them as feedback on how well the students have understood the areas I have covered. Every single student have responded positively to these initiatives and I will keep using them in my future teaching. To constantly improve my teaching skills, I have participated and will continue to participate in teaching workshops.

your answer here...

## **8. Any other information or comments.**

Type your answer here...