

## 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.

Course coordinator and main lecturer in "Corporate Environmental Management" at BEM 5

- Environmental management systemt
- Environmental policies
- Circular Economy
- System Thinking
- Stakeholder engagement

"Tools and Systems of Sustainable Development", in 2002-2018 previously called "Corporate Environmental Management"

- Environmental management systems
- Life Cycle Management
- Employee Participation

Supervisor, semester projects 2003-2021

- Environmental management systems
- Life cycle management
- Environmental Product Declarations
- Environmental labelling

Supervisor, master theses (2004, 2006, 2010, 2011, 2012, 2014, 2016, 2017, 2018, 2021 - Environmental management

- Life Cycle management
- Environmental labelling
- LCM and regulation
- CSR in industry

Lecturer, Research methodology (2004 - 2007, 2009 - 2018)

- Interviews
- Focus Groups
- Research Design

Course coordinator and lecturer in the course "Context and history of Planning" (2009-2020)

- Strategic Environmental assessments
- Planning in Denmark

Supervisor for semester projects: Planning students-Occupant's influence on energy consumption in buildings (2009-2012)

- LAR methods
- User involvement in planning

Co-supervisor for semester projects: Planning, Electrical engineering, IT-engineering, Production engineering, Product and Design Psychology, and Energy engineering students)(2002-2020)

- Eco-design
- Environmental technology assessment
- Life cycle considerations
- Environmental management
- Actor analysis
- Environmental regulation
- Data collection methods

Course coordinator and lecturer in the course "Problem Based Learning in Science Technology and Society" previously called "Science Technology and Society"(2004-2018)

- Eco-design
- Environmental technology assessment
- Life cycle considerations
- Environmental management
- Actor analysis
- Environmental regulation
- Data collection methods
- Problem Based Learning (collaboration, project management, conflict management, learning, meta-learning, presentation

technique, structuring projects etc.)

## **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.**

PBL-STC-coordinator. From 2010-2018, I have been coordinator for the teaching in "Problem Based Learning in Science Technology and Society" for all first year students at the Faculty of Science and Technology. This task includes identifying and approving teachers and supervisors for more than 5000 teaching hours each semester. The coordination task also includes a yearly evaluation of the performed teaching and planning a teaching seminar each spring.

Semester coordinator. In 2009-2016 I was semester coordinator for 1st and 2nd semester in the bachelor program "Urban, Environmental and Energy planning".

Course coordination. As introduced in the tables above I have been coordinating several courses. I developed the courses in "Problem Based Learning in Science Technology and Society" and "Context and history of Planning" from scratch, as I was the first coordinator after a revision of the study guidelines.

During a reform of the education "Urban, Environmental and Energy planning" in 2009 I was main responsible for development of the curriculum for 1st and 2nd semester, and have participated in the revision of the bachelor curriculum in 2015.

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

From 2009-2011 I have successfully completed the course in University Pedagogy for Assistant Professors at Aalborg University. In the pedagogical statement from my supervisors, they acknowledged my well-prepared lectures and supervision and the use of practical examples and involvement of the students.

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

From 2010 - 2018 have I each spring arranged a seminar for the lecturers in "Problem based Learning for Science Technology and Society". It has been a great experience to collaborate with between 20 and 30 engaged lecturers. The seminar has two main purposes, to introduce new lecturers to the curriculum and different ways of lecturing and for the more experienced teachers to inspire each other to new ways of teaching, new texts to address or methods to apply.

The seminar provide a platform for discussion of teaching and the PBL model across the different schools and study boards, and thereby discovering new trends in the way the students collaborate, learn and need supervision.

## **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.**

- Developing teaching materials for both the danish and english version of PBL lectures for first year students.
- Developed teaching material for most of the lectures presented under "topic 1"

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

In 2012 I was elected "Teacher of the Year" at The Study Board of Development and Planning at Aalborg University. Some of the arguments for the election is engaged teaching and well-prepared lectures and workshops.

## **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.**

I have been lecturing in several different courses since 2002 and this have given me the opportunity to make an ongoing evaluation and improvement of my teaching. The headings selected below are based on the areas that I have chosen to work with.

### 1 Student involvement in lectures

Asking questions and including small assignments in the lectures facilitate that the students are active during the lecture, and it is my experience that they pay more attention when they are active several times during a lecture. Small discussion assignments or breaks can also be used to ensure that the students discuss with the fellow students and thereby use the content they just expounded.

A specific challenge is to activate the students when lecturing for classes that includes 100 students or more. Small breaks with discussion and assignments can also be applied in large classes. The online tool "Socrative" has also shown to be very efficient in the lectures I give to large classes. One example is seven questions that they need to answer based on content they were just explained. The total score shown online and on the projector, both show the students, and me how well they understood the content of the class.

Short presentations by students based on group assignments is one of the methods I apply in smaller classes. The students reflect more on their assignments when they have to present their results in the class.

### 2 Learning through workshops as a supplement to lectures

I enjoy lecturing but have experienced that some topics are taught better through student-centered workshops. Below I have listed some of the areas in which I already teach through workshops, and also elaborate on my plans to work with this in the future.

#### Methodology workshops

In the last 7 years I have held 11 methodology workshops for both bachelor and master students. The focus of the workshop is the development of a project design, to discuss qualitative and quantitative problem formulations and related methods and finally discuss the types of conclusions that the research design allows for.

The methodology workshops have gained very positive evaluations from the students at bachelor level. It is my experience that the students have a great learning outcome from these methodology workshops. The learning outcome is shown in the way the students handle project design, problem formulation and conclusions at the 2nd semester, where they are much more reflective and structured in their choices of methods, the discussions on validity of their findings and the connection between problem formulations and conclusions.

At master level the methodology seminar have gained positive evaluation from the students as well. At master level the methodology workshop is supplemented with some reflections based on theories of science.

### 3. Problem formulation workshops

The last five years I have applied problem formulation workshops for 1st semester bachelor students in electrical engineering and autumn 2014 also for Robotics students. In the workshop, the students develop their initial problem formulation and potential solutions to these problems through a creative process. The students are very motivated to work in this type of workshop and as a side effect is, that they also feel a greater ownership for their projects when they develop the initial problem formulations themselves.

## 8. Any other information or comments.

After I finished the course in University pedagogy for teachers, I have continued on trying to improve the learning outcome of the students. I have been inspired by Paul Ramsden who wrote *God undervisning på videregående uddannelser* (Good teaching at higher educations) a part of the book "Strategier for bedre undervisning" (strategies for better teaching).

Poul Ramsden points towards 6 principles for better teaching that I have worked towards implementing. These are presented below together with an explanation on how they influence my teaching.

1. Interest and explanation; It is important to give explanation to especially complex material and make the content interesting. The thesis is that students work more intensive with things they find interesting.

I use many real world examples in my teaching both to make the complex material interesting but also to explain it with other words than the theoretical approach can do.

2. Interest and respect for the students and their learning. Good teaching is about making the students confident that they understand the material and encourage them to test their knowledge.

I facilitate this by developing assignments that secures that the students work with the material, and have a progression in the assignments so that they become more and more complex.

3. Appropriate assessments and feedback through frequent reply to the students work.

I give feedback on both the assignments made by the students and the presentations they give on class. For the first year students I have furthermore scheduled two consultancy sessions in each group pr. semester where I give feedback on the assignments they have worked on for the lectures. In supervision of semester projects, I also give feedback on working papers many times during the semester.

4. Clear goals and intellectual challenges; There should be clear goals with the teaching and it should be clear to the students what they are expected to learn.

I start each lecture by telling the students what the learning objectives with today's lecture are, and discuss these with the students in the end of the lecture to make sure that they understand the link between the goals and the content of the

lecture. Related to supervision of semester projects I also discuss the learning objectives with the students, and how the students can meet these objectives through their projects.

5. Individuality, control and active engagement; the students need to be engaged in the lecture and play an active role.

As described earlier in this portfolio I work intensely with activating students during the lecture, by asking questions, letting them discuss and give feedback on the material presented.

6. Learn from the students; use evaluation and feedback from the students to improve the teaching.

After each lecture I ask the students for feedback on both content and methods applied in the teaching, and let this inspire me in the following lectures (or at supervisor meetings)