

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 lectured and supervised in the topics of hydrodynamics and structural engineering under the Civil Engineering program at AAU at both BSc and MSc levels. My teaching activities are outlined below.

Lecturing:

- "Continuum Mechanics, Three-Dimensional Beam Theory, and Stability", 5th semester course, BSc, Civil Engineering, AAU (2024), course leader.
- "Renewable Energy Structures: Wind Turbines and Wave Energy Devices", 3rd semester course, MSc, Civil Engineering, AAU (annually since 2022).
- "OpenFOAM Days", voluntary student activity for BSc and MSc engineering students, AAU (2022).

Supervision:

- "Analysis of Rigid and Flexible Sails in an Oscillating Wave Surge Converter", long MSc thesis (45 ECTS), Civil Engineering, AAU (2024-2025).
- "High Fidelity Numerical Modelling of a Partly Submerged Sphere", long MSc thesis (45 ECTS), Civil Engineering, AAU (2022-2023).
- "Design and Foundation of a 3D Steel Structure", 5th semester project, BSc, Civil Engineering, AAU (2023).
- "Effects of Permeability of Rubble Mound Breakwaters on Overtopping Discharge", 9th semester project, MSc, Civil Engineering, AAU (2022).
- 1st and/or 2nd semester projects, BSc, Civil Engineering, AAU (2020, 2021, 2023).

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.

Type your answer here...

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

University Pedagogy Program 2024 with department supervisor Thomas Lykke Andersen (AAU BUILD) and pedagogical supervisor Jette Egelund Holgaard (AAU Learning Lab).

Statement from supervisors:

"We have supervised Jacob Andersen over the year (2024) that he participated in the university pedagogy program and observed a clear progression in his pedagogical development, most remarkably in the redesign of course modules.

The observations of lectures showed that Jacob presents himself as a well-prepared, calm and engaging lecturer. He has a special strength in communicating complex knowledge constructs in a stepwise fashion, which improves students' understanding. Jacob completely redesigned two lecture models to accommodate remote students in a blended learning environment e.g. by extensive development of teaching materials. At the same time, Jacob included activities to reinforce active learning and student motivation.

In a very well-prepared project report, Jacob has contextualized, documented, analyzed and discussed his experimentation to improve student learning in blended lecture formats. The experiment is contextualized by use of blended learning theory as well as reference to active learning and motivation theory. The redesign of lectures is properly documented, and conclusions are based on appropriate data. In the dataset, students' evaluations and performance from previous years is used to argue for the improvements and as a baseline compared to the results of the evaluation of the pedagogical experiment. The results document highly successful interventions, not the least in terms of bridging the gap between local and remote students. In the ongoing dialogue, Jacob Andersen has been highly engaged in a professional

learning community of four Assistant Professors, where he has carried out observations of peers and provided qualified pedagogically feedback. Furthermore, Jacob Andersen has showed his ability to reflect on his own teaching, act on the inputs and provide pedagogical arguments for further developments."

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.

Type your answer here...

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.

Type your answer here...

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 your answer here...

8. Any other information or comments.

Type your answer here...