

## 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.**

**Fall 2019:**

Sept. 2019 - Jan. 2020: Assistant teacher for two PBL courses (MAT, MATØK, MATTEK, NANO, PHYSICS and BEM, LAND, GEO) (*Bachelor*) (*Danish*)

**Spring 2020:**

Feb. - June 2020: Assistant guidance for 4 fields of study (EIT, PHYSICS, MAT and GEO) (*Bachelor*) (*Danish*)

Feb. - June 2020: Main supervisor for 2 groups at Geography (*Bachelor*) (*Danish*)

**Fall 2020:**

Sept. 2020 - Jan. 2021: Teacher at 2 PBL courses (MAT, MATØK, MATTEK, NANO, PHYSICS and BEM, LAND, GEO) (*Bachelor*) (*Danish*)

Jan 2021: Censor for 1 group - Geography (*Bachelor*) (*Danish*)

**Spring 2021:**

Feb. - May 2021: PBL workshops (16 in total) -

Conflict management: 5 WS. (SW, MAT, MATØK, MATTEK,) (*Bachelor*) (*Danish*)

Interdisciplinary collaboration: 2 WS. (EN and AIE - AAL and ESB) (*Bachelor*) (*Danish and English*)

Interdisciplinary problem design: 7 WS. (SW, IxD, DAT, BAIT, BEM - AAL and KBH) (*Bachelor*) (*Danish*)

Self study: 2 WS. (EN and AIE - AAL and ESB) (*Bachelor*) (*Danish and English*)

**Fall 2021:**

Sept. 2021 - Jan. 2022: Teacher at 2 PBL courses (MAT, MATØK, MATTEK, NANO, PHYSICS and BEM, LAND, GEO) (*Bachelor*) (*Danish*)

(*Maternity leave 2022*)

**Spring 2023:**

Feb. - May 2021: PBL workshops (12 in total) -

Conflict management: 5 WS. (BYG, MAT, MATTEK, MATØK, DAT, SW, IxD, DAT, BAIT) (*Bachelor*) (*Danish*)

Interdisciplinary collaboration: 5 WS. (EN, IV, MEA, DAT, BYG, TANT) (*Bachelor*) (*Danish*)

Different problem types: 1 WS. (LAND) (*Bachelor*) (*Danish*)

Professional communication: 1 WS. (MEA) (*Bachelor*) (*Danish*)

**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.**

Planning and coordination of the PBL course:

Autumn 2020

Autumn 2021

Planning and coordination of PBL workshops:

Spring 2021

Spring 2023

**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**

Type your answer here...

#### **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.**

The following articles have been published with a focus on competence development and/or development of teaching material in an PBL environment:

Routhe, H. W., Winther, M., Nguyen, N. T., Holgaard, J. E., & Kolmos, A. (2022). Challenges for engineering students working with authentic complex problems. I SEFI 2022: Annual Conference 19-22 September 2022 Barcelona (s. 1508-1517)

Bertel, L. B., Winther, M., Routhe, H. W., & Kolmos, A. (2022). Framing and facilitating complex problem-solving competences in interdisciplinary megaprojects: An institutional strategy to educate for sustainable development. International Journal of Sustainability in Higher Education (Print Edition), 23(5), 1173-1191. <https://doi.org/10.1108/IJSHE-10-2020-0423>

Winther, M., Routhe, H. W., Holgaard, J. E., & Kolmos, A. (2022). Interdisciplinary Problem-Based Projects for First-Year Engineering Students. I ASEE 2022 Annual Conference: Excellence through Diversity [37017]

Routhe, H. W., Winther, M., Magnell, M., Gumaelius, L., & Kolmos, A. (2021). Faculty perspectives on Future Engineering Education. I Proceedings of REES AAEE 2021 The University of Western Australia, Perth, Australia, 2021 AAEE - Australasian Association for Engineering Education. <https://aaee.net.au/search-all-publications/>

Winther, M., Routhe, H. W., & Lyngdorf, N. E. R. (2021). From chaos to complexity: – Digital collaborative problem designing and interdisciplinary reflexivity. 53-65. Afhandling præsenteret på Exploring Teaching for Active Learning in Engineering Education 2021, Kalundborg, Danmark. <http://www.etalee.dk/assets/etalee2021---book-of-abstracts.pdf>

Routhe, H. W., Bertel, L. B., Winther, M., Kolmos, A., Münzberger, P., & Andersen, J. (2021). Interdisciplinary Megaprojects in Blended Problem-Based Learning Environments: Student Perspectives. I M. E. Auer, & D. Centea (red.), Visions and Concepts for Education 4.0: Proceedings of the 9th International Conference on Interactive, Collaborative, and Blended Learning (ICBL2020) (s. 169-180). Springer. Advances in Intelligent Systems and Computing Bind 1314 [https://doi.org/10.1007/978-3-030-67209-6\\_19](https://doi.org/10.1007/978-3-030-67209-6_19)

Holgaard, J. E., Kolmos, A., & Winther, M. (2020). Designing Progressive Intended Learning Outcomes for PBL: A Workshop Format for Curriculum Redesign. I A. Guerra, A. Kolmos, M. Winther, & J. Chen (red.), Educate for the future: PBL, Sustainability and Digitalisation 2020 (1 udg., s. 331-340). Aalborg Universitetsforlag. International Research Symposium on PBL

Winther, M., Bertel, L. B., Routhe, H. W., Kolmos, A., Andersen, J., & Münzberger, P. (2020). AAU Megaprojects: An Educational Strategy for Sustainable Development. I Proceedings from the 2020 International Conference on Sustainable Development (ICSD) <https://ic-sd.org/wp-content/uploads/2020/11/Lykke-Brogaard-Bertel.pdf>

#### **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.**

Development of PBL workshops - 2021 - within:  
Conflict management  
Interdisciplinary collaboration  
Interdisciplinary problem design  
Self study

Research and development (*working group*) AAU megaprojects - 2020-2022

Development of PBL workshops - 2023 - within:  
Different problem types

#### **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...