

## Undervisningsportfolio

**1. Undervisnings-CV: Oversigt over undervisnings- og vejledningsopgaver med angivelse af fagområder, omfang, undervisningsniveau (bachelor, kandidat, efter-/videreuddannelse, ph.d.). Type af undervisningsform angives, f.eks. forelæsning, holdundervisning, øvelse, vejledning, eksamination, censur, fjernundervisning, internetbaseret undervisning og evaluering af undervisning. Undervisningssprog angives.**

2015

Courses:

Netværk og Forandring BD5

Sustainable Transitions SD2

Supervision: BD5, SD3, SUSCI1, SUSCI4

Coordination: BD5

2016

Courses:

Netværk og Forandring BD5

System Visualisering BD5

Sustainable Transitions SD2

Supervision: BEM3, SD3, SUSCI1, SUSCI3, SUSCI4

Coordination: BD5

2017

Courses:

Netværk og Forandring BD5

System Visualisering BD5

Infrastruktur og Systemer BEM5

Sustainable Transitions SD2

Supervision: BD2, BD5, SD2, SUSCI1, SUSCI2, SUSCI3, LM3, UPM3, SD3, SUSCI4

Coordination: BD5

2018

Courses:

Netværk og Forandring BD5

System Visualisering BD5

Infrastruktur og Systemer BEM5

Sustainable Transitions SD2

Supervision: BD5, SD1, SD3, SUSCI3, SUSCI4, LM4

Coordination: SD, BD5

2019

Courses:

Netværk og Forandring BD5

Sustainable Transitions SD2

Supervision: BD5, SD4, SUSCI2, SUSCI4

Coordination: SD, SD4, BD5, Karriere VIP

2020

Netværk og Forandring BD5

Production Systems and Sustainability SD1

Sustainable Transitions SD2

Supervision: BD4, BD5, SD1, SD3, SD4, SUSCI2

Coordination: SD, SD4, BD5, Karriere VIP

2021

Netværk og Forandring BD5

Sustainable Transitions SD2

Supervision: BD5, SD2, SD3, SD4

Coordination: SD, SD3, SD4, Karriere VIP

2022

Sustainable Transitions SD2

Supervision: BD5, SD2, SD3, SD4, SUSCI4

Coordination: SD, SD3, SD4, Karriere VIP

**2. Administration og ledelse af uddannelse: Erfaring med uddannelsesledelse og –koordinering. Oversigt over studieadministrative opgaver, eksempelvis medlem af studienævn, studieleder, semesterkoordinator, fagkoordinator, akkreditering m.v. Erfaringer med planlægning af uddannelsesafvikling. Erfaring med udvikling af uddannelser.**

## **Deltagelse i udvalg, kommissioner m.m. vedr. uddannelse.**

I was semester coordinator for BD5 since 2015 to 2020. I was part of the team and main responsible for developing the contents of the 5th semester project and struggling to align the content of the courses with the theme of the semester which is system design for sustainable transitions. This led to several innovations: in the course of Statistics we reached an agreement for the teachers of that course to include a module on data gathering methods and statistical analysis for something that could be useful for the students project semester. The technical course Fluid Mechanics which was focused on training the students in the classic physical principles of laminar fluids was replaced by a course in Systems Modelling and Simulation which still is a technical course, but more in line with the semester theme. The technical simulation is still not directly applicable to the semester project, but at least there is a thematic alignment.

## **3. Formel pædagogisk uddannelse: Oversigt over gennemførte universitetspædagogiske kursusforløb, PBL-kurser, workshops, udviklingsprojekter, kollegial supervision o.l. Udtalelse fra universitetspædagogikum. Deltagelse i konferencer om pædagogik og didaktik. Dokumentation i form af kursusbeviser, udtalelser m.m. vedlægges.**

Before starting at Aalborg University in 2012 I had completed the University Teaching Training Program at DTU, which covered designing classes, courses and programs. Before 2015 at Aalborg University I took a course in Conflict Management in PBL. And this year I took an online course on how to properly give Feedback. I was also involved in two Erasmus projects about PBL: Citylab LA and Citylab CAR, where I contributed with knowledge and experience in teaching PBL for Sustainability. Out of the first project I was involved in three publications. Coppens, T., Fregonara, E., Pineda, A. F. V., Holgaard, J. E., & Tellés, P. K. K. (2020). Editorial. Journal of Problem Based Learning in Higher Education, 8(1). Nunez, H. C., Rybels, S., Coppens, T., & Pineda, A. F. V. (2020). World Café as a Participatory Approach to Facilitate the Implementation Process of Problem-Based Learning. Journal of Problem Based Learning in Higher Education, 8(1), 19-40. Coppens, T., Pineda, A. F. V., Henao, K., Rybels, S., Samoilovich, D., De Jonghe, N., & Nunez, H. C. (2020). Innovating Education for Sustainable Urban Development through Problem Based Learning in Latin America: Lessons from the CITYLAB Experience. Journal of Problem Based Learning in Higher Education, 8(1), 1-18.

## **4. Andre kvalifikationer: Bidrag til konferencer, debatindlæg, videnskabelige artikler om pædagogiske emner m.v. Kollegiasupervision, redaktørarbejde, erfaring som mentor og anden kompetenceudvikling.**

I am a permanent student and researcher of issues that relate to education in engineering. I have been part of the following publications:  
Pineda, A. V., & Niero, M. (2020, May). What Is Sustainable Design Engineering (Sde)? Perspectives From a Problem-Based Learning Education: M. Sc. in Sde At Aalborg University Copenhagen. In Proceedings of the Design Society: DESIGN Conference (Vol. 1, pp. 1825-1834). Cambridge University Press.  
Pineda, A. F. V., & Jørgensen, U. (2018). The challenges of teaching sustainable system design. In DS 92: Proceedings of the DESIGN 2018 15th International Design Conference (pp. 2485-2494).  
Pineda, A. F. V., & Jørgensen, U. (2018). Sustainable System Design at Aalborg University, Denmark. *Diseña*, (12), 126-149.  
Pineda, A. F. V. (2013). What can engineering systems teach us about social (In) justices? The case of public transportation systems. In *Engineering education for social justice* (pp. 203-226). Springer, Dordrecht.  
Jørgensen, U., Pineda, A. F. V., Remmen, A., & Mathiesen, B. V. (2013, September). Integrating sustainability in Engineering Education in Denmark. In 8th Conference on Sustainable Development of Energy, Water and Environment Systems.  
Jørgensen, U., & Pineda, A. F. V. (2012). Entrepreneurship and response strategies to challenges in engineering and design education. *International Journal of Engineering Education*, 28(2), 407-415.

## **5. Pædagogisk udvikling og forskning: Udvikling af nye kurser, undervisningsmateriale, undervisnings- og eksamensformer eller andet udviklingsarbejde. Didaktisk og pædagogisk forskning. Samarbejde med eksterne samarbejdspartnere.**

New courses developed since 2015  
Netværk og Forandring BD4  
System Visualisering BD5  
Infrastrukturer og Systemer BEM5  
Sustainable Transitions SD2  
Production Systems and Sustainability SD1  
New semester projects developed since 2015:  
System Design for Bæredygtighed BD5  
Staging Collaborative Design for Sustainability SD1  
Design for Sustainable Transitions SD1

## **6. Udtalelser om undervisningskompetencer fra foresatte og kolleger. Undervisningsevalueringer og eventuelle udmærkelser for undervisningsvaretagelse.**

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## **7. Evt. personlige refleksioner og initiativer: Personlige overvejelser knyttet til undervisning og vejledning, ønsker til og planer for pædagogisk videreudvikling, planer for opfølgning på undervisningsevalueringer m.v. Refleksioner over eget pædagogiske arbejde, dets målsætninger, metoder og gennemførelse. I refleksionen analyseres og motiveres dine pædagogiske aktiviteter i forhold til din pædagogiske forståelse og de studerendes læring. Tanker om undervisningsformen på Aalborg Universitet, der har et stort indhold af gruppeorganiseret projektarbejde og problembaseret læring (PBL).**

My Manifesto on Teaching

Why do I teach?

The main reason I teach is because I like it! I have always liked it and I have devoted my life to teach, learn how to teach, improve my teaching, create new courses and create new education programs.

For me teaching is about learning with the students. In this sense, the most exciting adventures have been to create new courses, programs and activities and test them with the students. I feel also privileged to work at Aalborg University in Denmark because this institution has Project and Problem Based Learning as its core structural pedagogical principle. This means that in all educations at all levels, from the first semester of the bachelors to the last semester of the masters and all PhD courses and activities are based on problems and projects. Therefore, the opportunities teachers have for learning with the students are higher than in traditional universities.

I have also the privilege of teaching and learning with students in three languages and with regular activities in three countries: Denmark, Colombia and the United States.

Although teaching as "learning with the students" sounds great and ideal, it requires a lot of work. The first thing one must remember repeatedly, is that teaching is not about telling the students verbally the contents of a given theory or body of knowledge. This is difficult because this is how most teachers behave around the world and most students expect.

Teaching is about creating the conditions for students to learn by themselves. In this sense, it is good that teachers use less time to present contents, and more time to give feedback. I learned this first through a very high-quality training course in pedagogics at the Technical University of Denmark where I developed my PhD (2006-2010) and where I worked as a postdoctoral researcher and junior teacher (2010-2012). The main message of this training course was precisely that: good teaching is about creating the conditions for students to move their own frontier of knowledge. The course itself was a very good example of what it was intending and thus as a student I had complete control of my learning process, I got valuable feedback from my peers and teachers, and I appropriated the basic principles and the tools to set into motion my own process of learning how to teach, monitoring my teaching, and continue improving my skills and competencies.

One very valuable principle I learned in 2012 was that of constructive alignment: the objectives, the activities, the evaluation and the outcomes of a course, a semester or a project should be aligned. And this requires a lot of thought, discussion, and work. One way of checking that this is working is to present the students the first day of the semester with the actual questions of their final evaluation. If everything is aligned it should be clear for the students and for the teacher that the objectives, and nothing else, is what is assessed in the final evaluation. All the activities in the course during the semester should support students' learning to be able to successfully approve their examination. This only makes sense when the examination is a comprehensive advanced discussion of the learning process. This fits perfectly with the oral exams used to evaluate projects at Aalborg University.

Another very valuable principle I have learning through my training in PBL teaching and through my experience as a supervisor of projects at Aalborg University is that students should take 100% in the responsibility of their learning process. The supervisor must refrain as much as possible from taking responsibility for any aspect of the learning process, be it, the mastering of knowledge, finding relevant additional knowledge and resources, solving internal problems of the students' working teams or organising students' learning activities. As a supervisor I should support students' learning and organising activities, and challenge them to do more, but never take responsibility or do what they should be doing.

## **8. Andet.**

Skriv dit svar her...