

## 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.**

**Summary:**

I have experience being a course lecturer, course examiner, course censor, course teaching assistant, project supervisor, and project censor.

**Course Lecturer, Examiner, Censor, and Teaching Assistant:**

2015 - Fall, 1st Semester, DAT1 / SW1, Imperative Programming, Teaching Assistant.  
2016 - Spring, 4th Semester, DAT4 / SW4 / CS-IT8, Languages and Compilers, Teaching Assistant.  
2020 - Spring, 4th Semester, DAT4 / SW4 / CS-IT8, Languages and Compilers, Teaching Assistant and Examiner.  
2023 - Spring, 4th Semester, DV4, Big Data Systems, Teaching Assistant.  
2023 - Spring, 8th Semester, SW8, Selected Topics in Programming, Censor.  
2023 - Autumn, 7th Semester, SW7, Data Intensive Systems, Teaching Assistant.  
2023 - Autumn, 7th Semester, DAT7 / CS-IT7, Selected Topics in Database Research and Practice, Lecturer.  
2023 - Autumn, Master i Informatikundervisning, Databaser og Begrebsmodellering, Censor.  
2024 - Spring, 4th Semester, DV4, Big Data Systems, Teaching Assistant and Lecturer.

**Problem-Based Learning Group Supervisor and Censor:**

2015 - Fall, 5th Semester, SW506E15, Title - Turret Intelligently Tracking Lego Enemies, Supervisor.  
2015 - Fall, 5th Semester, SW507E15, M.E.D.I.N.A. - Mapping Environments Done Incrementally Nonrandom and Autonomous, Supervisor.  
2015 - Fall, 1st Semester, DAT1B2-1A, Optimizing af Ray Tracing, Censor.  
2015 - Fall, 1st Semester, DAT1B2-1B, Google PageRank, Algoritmen og Anonymitet, Censor.  
2015 - Fall, 7th Semester, SW702E15, SCAM - System for Home Care and Monitoring, Censor.  
2016 - Spring, 4th Semester, SW402F16, CoDex: A Parallelism Oriented Language, Supervisor.  
2016 - Spring, 4th Semester, SW403F16, SPPL - Simple Parallel Programming Language, Supervisor.  
2016 - Spring, 4th Semester, SW404F16, Quantum - The Parallel Programming Language, Supervisor.  
2016 - Fall, 1st Semester, DAT1B2-07, Rejsekort V2, Censor.  
2016 - Fall, 1st Semester, DAT1B2-11, Skemalægning i skoler vha. genetiske algoritmer, Censor.  
2016 - Fall, 1st Semester, DAT1B2-13, Kontekstbaseret Sortering af E-mails med Bayesiansk & Genetisk Algoritme, Censor.  
2017 - Spring, 4th Semester, SW404F17, CCure, Supervisor.  
2019 - Fall, 7th Semester, SW701E19, StudyDojo - The Place of Problem Based Learning, Censor.  
2021 - Fall, 9th Semester, CS-21-DT-9-02, Support for Adjustable Sampling Interval in ModelarDB, Co-Supervisor.  
2022 - Fall, 7th Semester, CS-22-SW-7-07, Axio - A Scalable Personalized Activity Recommender System, Censor.  
2022 - Fall, 7th Semester, CS-22-SW-7-09, Programming Paradigms Practice Platform, Censor.  
2022 - Fall, 7th Semester, CS-22-SW-7-11, Massive Open Online Courses Application for Universities, Censor.  
2023 - Fall, 1st Semester, CS-23-DAT-1-P1-02, Recipe Suggestion Application, Censor.  
2023 - Fall, 1st Semester, CS-23-DAT-1-P1-03, Peer-to-Peer Food Sharing - A SOLUTION TO COMBAT CONSUMER BASED FOOD WASTE, Censor.  
2023 - Fall, 1st Semester, CS-23-DAT-1-P1-06, A Healthcare Appointment Scheduling System, Censor.  
2023 - Fall, 1st Semester, CS-23-SW-1-P1-16, Optimizing clearance and moveability in minefields, Censor.  
2023 - Fall, 7th Semester, CS-23-SW-7-06, Occupancy Estimation using Bluetooth and Wi-Fi - A Demand Driven HVAC Control System, Censor.  
2024 - Spring, 4th Semester, CS-24-SW-4-03, Supervisor.  
2024 - Spring, 4th Semester, CS-24-SW-4-10, Supervisor.  
2024 - Spring, 4th Semester, CS-24-SW-4-12, Supervisor.  
2024 - Spring, 4th Semester, DAT4 / SW4, Assisting groups with building compilers and interpreters based on the languages and compilers course, Supervisor.

**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.**

None.

**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.**

**Courses:**

2015 - Problem-based Learning at the Department of Computer Science.

2024 - Aalborg University University Pedagogy Program.

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

None.

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

**2015 - Autumn, 1st Semester, DAT1 / SW1, Imperative Programming, Teaching Assistant:**

Created a written and video guide that documents how to install and configure the software required for the course's exercises on macOS.

**2020 - Spring, 4th Semester, DAT4 / SW4 / CS-IT8, Languages and Compilers, Teaching Assistant and Examiner:**

Assisted with switching the course completely online in one day due to Covid restrictions, and helped design a new type of oral exam where the students had to submit videos in which they answered general questions they had seen before and a few specific questions they had not seen before.

**2021 - Fall, 7th Semester, SW7, Data Intensive Systems:**

Evaluated a set of pygrametl exercises for use in the course and created solutions for these exercises.

**2023 - Spring, 4th Semester, DV4, Big Data Systems, Teaching Assistant:**

Wrote a guide that documents how to install and configure the software required for the course's exercises and mini-projects on Microsoft Windows.

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

None.

**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).**

**Teaching Philosophy and Experience:**

I strongly prefer teaching students how to work independently and solve problems on their own, e.g., through Problem-based Learning, instead of providing them with concrete answers. Thus, I encourage students to take the initiative, work on problems that motivate them, and reflect on both their processes and their solutions. I have found that students get a much deeper understanding of a topic by actively solving problems related to that topic compared to only passively receiving information about it through literature and lectures. Actively solving problems related to a topic also seems to make it easier for students to recall what they learned from the literature and lectures, and more importantly, teaches them how to learn independently. However, as Problem-based Learning is driven by a problem, it must motivate the students. For example, I found that project proposals should not be too concrete and should not contain specific problems as some students then focus on solving the provided problem instead of exploring the topic through Problem-based Learning.

**Pedagogical Development:**

I generally use a data-driven approach to improve my teaching. During each semester I document whenever students have a problem understanding specific topics and what I did at that time to assist the students. For example, when I supervise a group doing Problem-based Learning, I write down what information I provide the students in each meeting, and after the subsequent meeting, I write down how that impacted the students. Then at the end of the semester, I try to determine in what areas I need to improve my supervision based on how well each group I supervised achieved the learning goals and the notes I collected from my meetings with the students. Likewise, when I am a teaching assistant, I write down each question I receive and the answers I provide. After each session, I try to understand why the students needed to ask these questions, e.g., did the students not gain the required knowledge from the lecture or are some of the exercises unclear. In addition, by looking at which topics I had to explain in multiple different ways before the students' questions were answered satisfactorily, I can determine which parts of the syllabus I am unable to disseminate efficiently. Finally, at the end of the semester, I try to determine if there are any patterns in the students' questions, e.g., if most of the questions are about how to interpret the exercises for a specific lecture these exercises should probably be updated.

**8. Andet.**

None.