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Pedagogical training

Lecturer Training Program at University of Southern Denmark (2022-2023)

Teaching Philosophy

Teaching and supervision

Data science and machine learning, 2022, Lecturer, Master level, English, Autumn 2022, 12 weeks-48 teaching hours, Lecturing and group study, oral exam, 50 students

Pahl, J., Cai, J. & Pereira, M. M.
01/09/2022 → 06/12/2022

Teaching and supervision: [Course](#) › [Teaching](#)

Fremtidens Produktion-2, 2023, Lecturer, Bachelor level, English/Danish, Spring 2023, 12 weeks-48 teaching hours, Lecturing, discussing and group study, oral exam, 28 students

Cai, J. & Pedersen, J.
01/02/2023 → 01/06/2023

Teaching and supervision: [Course](#) › [Teaching](#)

Industry IoT in operations

Cai, J.
08/02/2024 → 30/06/2024

Teaching and supervision: [Course](#) › [Teaching](#)

Introduction to deep learning and its current application (Technology-3), 2022, Guest lecturer, Master level, English, Spring 2022, 4 teaching hours, Lecturing and group study, oral exam, 7 students

Cai, J.
12/04/2022 → 12/04/2022

Teaching and supervision: [Course](#) › [Teaching](#)

Programming for engineers

Cai, J.
08/02/2024 → 30/06/2024

Teaching and supervision: [Course](#) › [Teaching](#)

Supervision of the seminar project of a student (Mikkel Liep Nielsen), 2022, Individual supervision

Cai, J.
01/03/2022 → 01/05/2023

Teaching and supervision: [Supervision](#)

Supply Chain Data Analyse and Digitalisering 2, 2023, Lecturer, Bachelor level, English, Spring 2023 12 weeks-48 teaching hours, Lecturing and group study, oral exam, 28 students

The core of the pedagogical activities should always be students, considering their backgrounds, educational levels, personalities and needs, among other things. The student-centered thread determines my designing of courses, individual lectures, and interactive activities in classes. Adjustment should always be conducted along with the variation and feedback of students. Aims and competency goals vary with the variation of the relevant programs of study, e.g., Master program or Bachelor program. A close connection should be built between the teaching practice and course competency goals. For instance, a deeper and more challenge task can be normally used for Master courses, whereas a broader and superficial context may be more suitable for Bachelor students. In order to facilitate the learning outcomes, I generally implement different teaching methods and theories in my lectures, for instance the audience responses systems and think-pair-share theory in classes.

As a university teacher, we are not only the instructors of fundamental knowledge learning, but most importantly, we should be the ones who can ignite the learning interests, learning autonomous and creativity of students. In addition, a university teacher should be a person who is always enthusiastic in pedagogical and willing to help students when needed. They should set a good example to students for learning at any time, especially when facing tough situations. My expectation for students is that they should always stay curious for unknowns and to stay hungry for existing knowledge. They should know what they want, or at least, they should try to find what they want during the learning process. Under this circumstance, learning would be full of fun and a benign loop of education would be shaped. From the side of institute, it is better to provide annual teaching training for the staff in order to constantly improve skills. Relevant seminars and platforms are needed for the sharing of teaching experience.

My teaching philosophy has been shaped during the LTP training process and it will be constantly updated in my further teaching career. Here, a brief example is set in order to demonstrate it. In the data science and machine learning course for master students that my colleagues and I taught last year, I noticed that there were a lack of programming skills for most of the students according to the digital survey in the beginning of class. Some students were even a little bit scared of learning programming. Thus, I rapidly updated all my designed in-class exercises with more explicit script descriptions. Meanwhile, more interactive learning strategies were added in order to get attentions from the students. Moreover, I cancelled some of challenges tasks in class, instead, I changed them into small assignments so that the students can get more time to work on them after classes. After each session, I always asked for the prompt feedbacks from the students' side so that I can make proper adjustment for a better learning outcome. It is found that such strategies and the student-centered philosophy works, which provided confidence to me for pedagogical education.