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.

Bachelor course – AC-kredsløbsteori (EN3) (AC circuit theory) (5 ECTS)
Time: yearly from 2021
Number of students: 40-42 yearly
Teaching Responsibility: I have been in charge of 3 lectures among the 12, 3.5 hours each. One of lectures is laboratory experiment to allow the students to know better what they have learned from the class.
Ph.D./Industrial course – DC Microgrids (3 ECTS)
Time: yearly from 2019
Number of students: 20-25 yearly
Teaching Responsibility: I have been in charge of 1 hour lecture, as well as preparing simulation models and handbooks and lecturing them for two half-day's laboratory exercises. I have been also in charge of guiding the students with finishing the lab exercises systematically and answering their questions.
Ph.D./Industrial course – AC Microgrids (3 ECTS)
Time: yearly from 2022
Number of students: 20-25 yearly
Teaching Responsibility: I have been in charge of 1 hour lecture introducing the technology that applied

Students' projects
Supervisor of Second semester Bachelor student's project
EN2-200-Discussion and analysis of generators for solar-wind-battery powered street lighting system.
Time: 02/2023-present
Language: English
Supervisor of Forth semester Bachelor student's project
EN4-404-Research on the control of buck converter applied in PV integrated power system
Time: 02/2023-present
Language: English
Supervisor of Master student's project – Mohit Kongat Nair – "Impact of energy islands on the stability of the AC transmission grid" (long thesis)
Time: 11/2022-present
Responsibility: As a thesis supervisor, I'll meet with the student(s) approximately once a week to discuss progress, time schedule, resources, lab work, ideas, issues etc.
Language: English
Co-supervisor of Bachelor students' project– EN3-306– "Analysis of Transformers Life Due to PV-Penetration"
Time: 10/2022-01/2023
Responsibility: As a project co-supervisor, I'll meet with the students with the supervisor approximately once a week to discuss progress, time schedule, resources, ideas, issues etc.
Language: English

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

The PBL course of our university provide good chance for me to obtain more knowledge about pedagogy and philosophy, especially the Adjunktpædagogikum courses. I will continuously attend and pursue such training in pedagogic skills and courses on PBL in the following years, as well as exploring for more materials dedicated to improving teaching technology

and practice. The information of PBL related courses/events in AAU of the following two years is listed below:
Adjunktpædagogikum courses: University pedagogy course for assistant professors at Aalborg University
I have finished the course Adjunktpædagogikum during the year 2022. Now working on the final report, which will be submitted in December 2022, the topic is about how to engage students in teaching.
The course in university pedagogy for assistant professors is a comprehensive, research-based pedagogical competence development course that provides assistant professors and other course participants with the pedagogical and didactic foundation for a permanent career at Aalborg University. Problem-based learning (PBL) is the focal point of the course in university pedagogy for assistant professors, and the course's overall objective is to develop and ensure the assistant professor's pedagogical competences for undertaking class teaching, supervision, the planning of teaching, and examinations on the university's study programs with the following five course modules, which is important for my teaching career:
a)Teaching at a PBL University
b)Planning and Implementation of Group Instruction
c)The Use of IT and Media for Teaching and Learning
d)The PBL Group – Collaboration, Process, and Supervision
e)Planning, Development, and Quality Assurance of Study Programs
Supervisor Workshop (2022)
I have attended the Supervisor Workshop (2022), a two-day workshop for young supervisors, which contains the topics in below:
oDay1: The supervisor role and aligning expectations
oDay2: Manage the process and support writing
Attend the Online PBL Courses
AAU offers free open online courses in PBL and how to start working with PBL.
a)Introductory course on PBL in higher education
b)Learn from the online films about the AAU PBL principles
oHow courses support the project work
oHow problems guide the student learning process
oThe students are responsible for their own learning
oProject organization creates the framework of problem-based learning
oCollaboration
oExemplarity

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.

1)2022 AAU Energy CAMP "Energy Systems For the Future" - sept. 6th-8th in Esbjerg: join as a supervisor for the students with their proposals.
2)2022 AAU Learning Day-6th May: the theme is PBL & Mission oriented teaching and learning.
3)Conference oral presentations:
SDEMPED 2015 (Symposium on Diagnostics for Electric Machines, Power Electronics and Drives)
ICCE 2015 (International Conference on Coastal Engineering)
ECCE-Asia (ICPE) 2016 (International Conference on Power Electronics)
ECCE 2016 (IEEE Energy Conversion Congress & Expo)
IECON 2016 (Annual Conference of the Industrial Electronics Society)
4)Conference poster presentation:
IECON 2017

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.

•Thoughts on the teaching method at Aalborg University
As we all know, Problem Based Learning (PBL) as a pedagogical approach is a core value for Aalborg University (AAU) and is adopted for all educational activities at AAU. I am very interested in becoming one of the facilitators to implement such education model to focus on motivation and assist my students to achieve self-defining purposes and to take initiative.
•Plans for the continued development of the applicant's own pedagogical competences and suggestions for new methods of teaching
1)Supervise more PhD students with their study based on PBL methods
Based on my industrial projects' experience, I was close to the real problems that the engineers face when preparing new products for the market. We have new PhD students to be enrolled every year. I'm eager to share my knowledge with them and offer help with their research topic.
2)Supervise master/bachelor students with their projects based on PBL methods
As far as I know, the master students in our department have to finish some small projects during their study. I also prepared some research topics for them when I was a PhD student. I'd like to take part in more research activities with

them to further improve my supervision and teaching skills.

6. References on your teaching skills from superiors or colleagues. Teaching evaluations and any teaching awards received.

Observation of Baoze Wei - lecturing

Date: 05/10/2022
Title of Lecture: AC circuit theory
Observer: Jayakrishnan Radhakrishna Pillai
Duration of observation: 2 hours
Attendance: approx. 30 participants in the room
Programme and level: 3rd semester Bachelor students.

Date: 02/11/2022
Title of Lecture: Diodes and rectifiers
Duration of observation: 1 hour
Attendance: approx. 30 participants in the room
Programme and level: 3rd semester Bachelor students.

The main focus areas of the teaching observation are based on four aspects, 1) structure of the teaching material, 2) presentation of the lecture, 3) sharing of information and 4) student interaction and behaviour

Structure
Baoze gave a very good overview of the lecture topic and learning goals, its connection and applicability to the trends in Danish power systems. Overall, it took around 15 minutes. This could have been minimised considering the time-schedule for covering the different/diverse topics in the lecture. Some of the relevant slides may be distributed as introduction to the individual topics (as examples, illustration of power system structure showing difference between ac and dc supply, different voltage levels (single phase vs. three phase) etc.). After the general introduction, various sub-topics were presented and explained. It included: three phase power systems, star-delta configurations, star-delta transformation, active and reactive power relationships, and power factor. For each topic, one exercise each along with its solutions were included in the slides. The relevant concepts, steps, and calculations to solve the problems were nicely explained using the black board.

In the second lecture on diodes, the lecture overview was also very good, and the relevance of the topic was clearly outlined with its practical applications in the introductory slides. The fundamentals of the topics were also explained clearly, and its applications in energy systems. For explaining the different sub-topics, blackboard and slides were used in an appropriate way.

The structure of the presentation for both lectures were logical and seems carefully prepared to optimise students' overview of the topics.

Presentation style
Baoze has very good open gestures and body language that complement his presentation, thereby facilitating engagement, interest to the various illustrations and conveying the message to the students in a positive manner. Baoze maintained very good eye contact with the students during the lecture. The language and communication skills are good, and the explanations were clear. While explaining the concepts and solutions to the exercises in blackboard, it's recommended to use the blackboard space in a proper way and in a structured way, so that there is no overlap of the contents, and is clearly visible and interpretable to all the participants in the lecture room.

Information distribution
The use of suitable illustrations and appropriate theoretical contents that were presented in the slides and blackboard demonstrated a good distribution of the information. The lecture was given in a structured way, referring to the text on the slides along with suitable oral elaborations. Baoze has covered all the topics with appropriate explanations, which were accompanied with examples that included problems and its step-wise solutions. The use of these problems that links to the different topics in the lecture blended with the theoretical knowledge is a strong point in his approach to lecturing.

Student interaction and behaviour
During the first lecture, the student interaction was limited. In between the lecture, Baoze kept asking short questions, and sufficient time has to be allotted for the students to be engaged and wait for their reflection. Instead, the answers were given by the lecturer himself. Apart from allotting appropriate time for facilitating the discussions, breaking down questions to simple forms are also suggested to be practised for enhanced student interaction and reflection on the topic. During the lecture break, it was observed that some of the students were engaged in discussion with Baoze, that shows the level of interest and attention in the lecture. Other options for more student engagement and interaction could be through assigning some of the relevant and shorter parts of the problem solving by the students, and thereafter generate discussions based on its solutions.

In the second lecture, the lecture was delivered with clear pace and were also supported by structured contents and clear explanations. There was an active and enhanced engagement from the students, where Baoze has also adopted the strategy to allocate more time for the students to answer and has facilitated further follow-up discussion on the topic. There were around six instances of such Q & A and discussion sessions, where different students were involved.

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)

•Thoughts on the teaching method at Aalborg University
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•Examples of student evaluations of teaching and any follow-up on these
1)When and after giving the course of DC microgrid, some students indicate that:
some simulations and lab exercises are disconnected from the course lectures, which will be updated in the course of the following year.
One more point is that, they are asking for more time to finish the course assignments with better quality, which will be considered as well in the following year.
2)Last year, when and after giving the course of AC circuit theory, some students indicate that:
The slides can be better organized, it may contain too much information within one slides, so from this year, the slides has been well updated, it's easier for students to follow.
I'm also using more of the white bord during the course, for students to better understand the content.
I also tried to engage the student more in the class by proposing some questions for them to answer, which I have learned from the pedagogy course as well as my pedagogy supervisors.

8. Any other information or comments.

Apart from taking part in the industrial projects and doing scientific research, I have the faith in achieving the goals about teaching, and contribution to the Department of Energy in terms of teaching technology and practice within the scope of PBL model.