

## Teaching Portfolio

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## Teaching Philosophy

Any academic person's identity is inextricably linked to their teaching, which aims to improve learning and show the students that we care about them. It provides us the chance to meet with young, intelligent students, the majority of whom are just about to embark on their careers. Teaching entails motivating students to engage in exploratory learning, collaborate, participate actively, comprehend knowledge and its applicability in a real context, choose their own direction and area of study, and be accountable for their individual learning. My major objective as a teacher is to inspire students to use their creativity together with the necessary information to make the world a better place to live. There is no other job that has as much of an impact on young people's development of their professional futures and character as teaching. As a result, one should view it as a responsibility rather than a job, and one should possess a passion for teaching and learning.

My teaching philosophy can be summarized into three key items: (i) research-based teaching (without research, there can be no effective and high-quality teaching. So, I always endeavor to incorporate the most recent research findings into the courses, particularly in the more advanced courses), (ii) industry-oriented teaching (I choose to regularly monitor and observe activities in the industries, in addition to wanting to constantly update the course material. In the beginning of the course, I frequently present a real-world issue, and as the course progresses, I demonstrate to the students how to fix it), and (iii) learner-centered teaching (A crucial goal of teaching is to make students enjoy the content and thus learn more sustainably, by giving the students to choose what material they learn and how they learn it).

## Formal Pedagogical Training

I completed the Lecture Training Program (LTP, 10.25 ECTS) at SDU in 2022, which includes supervision, a pedagogical developmental project, and the following mandatory and elective courses:

1. Helping Students Understand Assessment (1 ECTS)
2. Use Student Response Systems in Your Teaching (0.5 ECTS)
3. Students as Learners (0.5 ECTS)
4. Research-based Teaching (0.5 ECTS)
5. Evaluation and Data Collection (0.25 ECTS)
6. Setting up your course in ItsLearning (0.5 ECTS)

## Administrative Task Related to Education

Since February 2022, I've been head of education in mechanical engineering at Campus Sønderborg - SDU, developing our newly established program while considering needs from the local industries and internal discussions with the colleagues and our students.

## Teaching Interest

Considering my whole academic and professional experiences, I am interested in teaching different courses from solid mechanics and materials area, including the following courses:

- Undergraduate:
  - o Mechanics of Materials
  - o Intro to Finite Element Methods
  - o Solid Mechanics
  - o Intro to Non-linear Mechanics
  - o Elasticity
  - o Structural Analysis and Design
  - o CAD/CAE
- Graduate:
  - o Fracture Mechanics
  - o Advanced Finite Element Methods
  - o Plasticity
  - o Metal Machining

- o Continuum Mechanics

## **Teaching Experiences**

Bachelor level courses (2015 - current):

- University of Southern Denmark: Solid Mechanics (Instructor), Mechanical Semester Project 3 (Instructor), Design and Build Mechanical Products (Instructor), Mechanical Semester Project 2 (Instructor)
- Federal University of Minas Gerais, Brazil: Intro to Java programming (Instructor)

Graduate level courses (2019 - current):

- Aarhus University: Fracture Mechanics (Co-Instructor), Plasticity: Theory and Modeling (Co-Instructor), FEM for Nonlinear Materials & Geometry (Co-Instructor).

## **Supervision Experiences**

- Main supervisor: Postdoc (1, current), Research Assistant (1, current), MSc (1, completed in 2022), and BSc (2 [current], 1 [completed]).
- Co-supervisor: MSc (5, 2020-2021), PhD (1, 2019).