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Teaching Philosophy

The overall aim of my teaching is to support students in becoming self-directed, autonomous learners who can critically reflect on and evaluate their own work and the resources available to them, thoughtfully drawing on these and building upon them. I believe it is valuable for students to understand that any teaching is ultimately about their learning. Whatever teaching situation they find themselves in, it is their responsibility to actively engage with their own learning. The foundation of my teaching practice is clear communication of expectations, authenticity, and a dialog-oriented approach, all grounded in my role as a facilitator of learning rather than a traditional teacher.

In a broad sense, my practice relates to the theories of Haeley (Haeley et al., 2005, 2014) and Sambell (Sambell et al., 2013) and builds upon the idea of students as partners in the creation of knowledge.

The knowledge-creation process is facilitated by carefully chosen TLAs that support students' growth within the subject matter. These include: (i) peer instruction; (ii) peer feedback and assessment; (iii) reflection through the creation of topical mind maps and formula booklets; and (iv) in-class problem solving.

This approach emphasises students' autonomy and helps them develop as active partners in the teaching-learning context and, likely, in their future professional endeavours. On the one hand, this is achieved by prompting them to take action and make decisions about instruction, feedback, and assessment. On the other hand, it supports reflection on their learning (knowledge, skills, etc.) in engineering contexts that are relevant and meaningful to them.

Undervisning og vejledning

Mathematics for Engineering 3 (BEn)

Janik, K.
01/09/2025 → 31/01/2026

Undervisning og vejledning: Undervisning

Advanced Characterization of Materials (MSc)

Janik, K., Laghrissi, A. & Leissner, T.
01/09/2025 → 31/01/2026

Undervisning og vejledning: Undervisning

Mathematics 3 (BSc)

Janik, K.
01/09/2024 → 31/01/2025

Undervisning og vejledning: Undervisning

MSc Project: Optical Microscopy Studies of Organic Semiconductor Thin Films Under Mechanical Strain

Kjelstrup-Hansen, J., Eriksen, R. L. & Janik, K.
01/01/2025 → 30/06/2025

Undervisning og vejledning: Vejledning

BSc project: High-Performance Organic Thin-Film Transistors

Kjelstrup-Hansen, J. & Janik, K.
01/09/2024 → 31/01/2025

Undervisning og vejledning: Vejledning

Other Teaching and Supervision Experience

2017-2023 IBDP Physics and Mathematics (International Baccalaureate Diploma Programme), Denmark
2020-2020 IGCSE and GCSE Physics, Science, and Mathematics (International General Certificate of Secondary Education and General Certificate of Secondary Education), Denmark and United Kingdom
2013-2015 X-Ray Diffraction of Crystalline Materials (BSc), mini-lectures and hands-on lab sessions within the course Condensed Matter Physics and Nanoscale Materials Physics, DTU Lyngby, Denmark
2012-2015 XRD and XRR, training, supervision, content development, DTU Lyngby, Denmark
2012-2015 SEM and EDX (MSc), hands-on lab sessions within the courses of Electron Microscopy and Analysis for Materials Research and Electron Microscopy for the Characterisation of Advanced Materials, DTU Lyngby, Denmark
2002-2003 Viscosity of Biological Liquids (MSc), hands-on lab sessions, Jagiellonian University, Poland

Courses in Education

2024-2025 Lecturer Training Programme, SDU Odense, Denmark
2020-2021 PGCE, University of South Wales, United Kingdom
2020-2021 Education Research-the Researchers in Schools Programme, United Kingdom
2019 - How to teach Science through Robotics, ESA, Belgium
2018 - How to teach Modern Physics, CERN, Switzerland
2016-2023 How to teach Physics and Mathematics in IBDP; How to supervise Experimental Investigations in Physics and Theoretical Explorations in Mathematics in IBDP - a variety of courses
2014 Teaching and Learning Course, LearningLab, DTU, Kgs. Lyngby