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Undervisning og vejledning

Build Industrial Electronics

Steffen Chemnitz
04/02/2019 → 31/08/2019

Build Industrial Electronics

Steffen Chemnitz
03/02/2020 → 31/08/2020

Develop Intelligent Dynamic Electronic Systems

Wulf-Toke Franke, Samaneh Sharbati & Steffen Chemnitz
01/09/2019 → 31/01/2020

Expert in team

Steffen Chemnitz & Jianzhi Fu
01/10/2020 → 22/01/2021

Experts in Teams

Roana de Oliveira Hansen, Steffen Chemnitz & David Grube Hansen
01/09/2020 → 22/01/2021

Fundamentals of P.E. Systems Engineering

Steffen Chemnitz & Wai Keung Mo
02/09/2019 → 31/01/2020

Teaching Philosophy

Identity and Learning Goals

Teaching future scientists at a public university – such as CAU Kiel or SDU – is an honor and high responsibility, for that outstanding research in the public domain is only legitimate if research insights are embedded into the teaching at that university. This underlying agreement about teaching is the university's core element as well as its reason of existence. Teaching and Research are to be indivisibly tethered together. Embedding current research into the coursework maintains a state-of-the-art curriculum and continuously feeds top- notch scientists into research.

Given this identity, I – as a teaching individual – strive to offer students this excellent curriculum. Translated into practical terms, this means for me to create a teaching-learning environment that enables students to navigate comfortably in:

- The scientific environment
- The expectations of skills and competencies
- The practical implications of theoretical concepts.

In other words, the focus of my teaching is to convey theoretical concepts using a broad variety of methods in a way that will enable students to translate their acquired skills in their future work environment.

Pedagogical Footing

When thinking of how to implement pedagogical theories into practical lecturing, expectations of skills and competencies provide a useful link. The six steps in the classification model by Anderson and Krathwohl¹ as seen in Figure 2 best illustrate this link. The aim is to enable students to solve problems independently, and as such, students need to reach

step 3 in Anderson and Krathwohl's classification (Anderson, L.W./Krathwohl, D.: A Taxonomy for Learning, Teaching, and Assessing. A Revision of Bloom's Taxonomy of Educational Objectives. Addison Wesley, 2001). This is valid for the entire learning process, both for teaching knowledge and for exams.

The curriculum improved over the course of several semesters with adjusting the methods for the classification model. Illustrated with a practical example, one lecture does not only convey one technological method, but compares several with their advantages and disadvantages. This results in the students not only knowing one method (classification steps 1 and 2), but they are able to apply the method and distinguish between alternatives given appropriate problem-solving skills.

The final goal (classification step 5) is for the student to be able to assess the situational usefulness of two alternative technologies and to choose the best fit, meaning for the student to judge and decide.