Teaching Portfolio

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Formal educational training

•Lecturer training Program at SDU. (SDU 2013)
•PhD supervisor course (SDU, 2012)

Administrative tasks related to education

•Member of the Ph.D.- Study Board for Faculty of Science and the Technical faculty 2004-2007.
•Member of the Education Committee for BMB 2014-2020
•Member of the Naturvidenskabelige fakultets undervisningsudvalg for farmaci (NUUF) 2018-
•Member of SDUs Internationalisation network 2017-2020

Experience with teaching, supervision and examination

Present teaching responsibility:
Responsible teacher
•Bioimaging BMB 825 in 2012-2018. 5 ECTS (previously BMB816)
•DaMBIC international PhD course Biophotonics (BMB825) 5 ECTS
•Anvendelser af matematik i lifescience BMB539 2017-
•Cross Institutional Bioimaging PhD Course 10 ECTS
Co-responsible teacher
•Fundamental biochemistry BMB 530 in 2013-. 5 ECTS
•First year projects (NAT501) 2014-
•Bioanalytisk instrumentering BMB509 2015-
•FY 821 Eksperimentel fysik III 2015-

Other courses
Lectures in:
oCross Institutional Molecular Biophysics 2012-
oModern trends and technologies in molecular cell biology BMB822 (2014)
Lab-courses and exercises in:
oBioanalytical instrumentation BMB509 2010-
oFY 821 Eksperimentel fysik III 2015-
oModern trends and technologies in molecular cell biology BMB822 2014

Censor
oBioimaging BMB825 in 2012-2015. 5 ECTS (previously BMB816)
oDaMBIC international PhD course Biophotonics (BMB825) 5 ECTS
oFundamental biochemistry BMB 530 (written exam)
oNanobioscience FY518 (oral exam)
oFirst year projects NAT501 (oral exam)
oFY 821 Eksperimentel fysik III 2015-
oAnvendelser af matematik i lifescience BMB539 2017-

Previous teaching responsibility:
Other courses
Lectures in:
oBioanalytical instrumentation BMB509 2010-
oCross Institutional Molecular Biophysics 2012-
oBiology at the interface FY515 (2009-2014)
oModern trends and technologies in molecular cell biology BMB822 (2014)
oLaser physics and spectroscopy FY801 2009
oClassical mechanics FY14 2004

oAdvanced spectroscopy techniques FY/FYP96 -
oExperimental biophysics FY814 2012-
oNanobioscience technology KE 802 2014-
Lab-courses and exercises in:
oBioanalytical instrumentation BMB509 2010-
oPhysics A 2004
oAdvanced spectroscopy techniques FY/FYP96 -
oClassical mechanics FY14 2004
oFY814 Experimental biophysics 2012-
oModern trends and technologies in molecular cell biology BMB822 2014
oExperimental biophysics FY814 2012-
oNanobioscience technology KE 802 2014
Other activities
oLectures for high school teachers.
oLectures at secondary schools.
Censor
oBioimaging BMB825 in 2012-2015. 5 ECTS (previously BMB816)
oDaMBIC international PhD course Biophotonics (BMB825) 5 ECTS
oFundamental biochemistry BMB 530 (written exam)
oNanobioscience FY518 (oral exam)
oFirst year projects NAT501 (oral exam)
oExperimental biophysics FY814 (written exam)

Student supervision current:
5 PhDs
6 Master students
2 Bachelor
1 project student

Student supervision passed:
1 PhDs
27 Master students
23 Bachelor
16 project student

Methods, materials and tools

• I have experience in "classical" lectures, lab exercises, exercise classes and use of various electronic tools - such as discussion boards, blogs, wikis and student response system shake speak.
• I use project-based supervision in my teaching.
• I have developed various exercise guides.
• Use online tests as part of my teaching.

Educational development and educational research as well as educational awards

I have developed several new programs at BMB. For example, I recently was responsible for reforming the content of the physics and mathematics courses for BMB students. This has resulted in the course Anvendelser af matematik i lifescience BMB539.
I am also in the process of developing new computer based exams for BMB539 and BMB530.

I have been responsible for developing the courses "Advanced microscopy techniques BMB 816" and DaMBICs international PhD course in Biophotonics. The courses are based on state of the art bioimaging techniques that I have implemented in Denmark. The courses help to contribute to educating a new generation of scientists within Bioimaging. The PhD course has student from abroad and other Danish universities.
I recently initiated and organize a Cross Institutional bio imaging course (10 ECTS) which brings 20 -30 PhD students from around Denmark together at different universities and labs to see and learn state of the art bio imaging and image analysis.

Reflections on teaching

I have based my teaching on a constructivistic teaching theory. I try to forward an active learning environment in my class to motivate and engage the students. I also believe that it is important to meet the students where they are to be able to teach them effectively.
Based on this idea, I need to understand what the students already know, so that I can construct the course so that it builds on top of the student’s present knowledge.