

## Teaching Portfolio

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Biomedical Mass Spectrometry and Systems Biology

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## FORMAL PEDAGOGICAL EDUCATION

Year Course

2011 Teacher-training programme (associate professor level) lectures at the University of Southern Denmark (Syddansk Universitets Universitetspædagogikum)

2011 Computer-based ways of achieving interaction during teaching

2010 Course for Pd.D.-supervisors

2010 Teaching natural science subjects

## TEACHING RESPONSIBILITIES

Year Course Number of students My role

2012-present Fundamental biochemistry (BMB530) 110-140 Responsible teacher

2010-present Modul 4 (now Modul 3) (Medical biochemistry) 180-200 Responsible teacher

2010-present BMB205: Advanced methods in protein mass spectrometry 20-40 Teacher

2010-present BMB802: Proteomics: Techniques and application in biochemistry and biomedicine 20-40 Teacher

2010-present FF501: 1. year science project 3-5 Supervisor

2010-present Mass Spectrometry-based proteomics and its applications in biology (Copenhagen University) 20-30 Guest teacher

2010-present Undergraduate and graduate students (associated to my research group) 4 Supervisor

2009-2010 BMB515: Fundamental mass spectrometry 20-40 Teacher

2007-present EMBO and HUPO courses in Proteomics 20-40 Teacher

2005-2006 Molecular Biophysics (Uppsala University) 40-60 Teacher

## OTHER TEACHING RELATED ACTIVITIES

-Member of the Institute Teaching Committee at the Department of Biochemistry and Molecular Biology, University of Southern Denmark, (2011-present)

-Member of the Educational Board, University College Lillebælt, Denmark (2012-2013)

-Member of the Study Board (Pharmacy), University of Southern Denmark (2013-2017)

-Member of the Ph.D. Teaching committee at the Department of Biochemistry and Molecular Biology (2018-present).

## TEACHING PHILOSOPHY

Ultimate goal of university teaching: Achieved when a student is able to apply knowledge gained to new situations in a critical manner. This skill should be realized both independently, but also in collaboration with other people.

Why is this goal important? Because overcoming the "barrier" of critical thinking is necessary for development of new ideas, theories and concepts for solutions in academia and the society.

How can this goal be reached?

By active learning and self-motivation

By creating a dynamic and interactive classroom to stimulate discussions, reflection, and critical thinking.

By avoiding the monotonous element of lecturing and instead use combinations of power point slides, black board, and clicker questions and e-learn.

By promote learning through connecting my teaching to relevant cases (e.g. human diseases) or theories from other courses.

Considerations: Realizing that students learn differently. Some students learn best by visualizing, memorizing, experimenting, or peer-instruction, etc. This enforces use of many different teaching techniques.

## **ASSESSMENT**

I have experience with a wide range of examination methods, including oral examinations based on submitted reports (NAT501, undergraduate, and graduate exam) and written examinations (Modul 4 and BMB530). Examinations, including both a written reports and oral presentations, provide the most comprehensive evaluation of the student.

## **COURSE MATERIAL**

I have produced lecture notes (power point), laboratory protocols, group assignments, learning objectives (study guides), clicker questions, and exam assignments.