Teaching Portfolio

Christer S. Ejsing
Department of Biochemistry and Molecular Biology
Email: cse@bmb.sdu.dk

Educational Training

Formal educational training:

I have successfully completed a course on University Teaching ("Universitetspædagogikum", 8 ETCS points). In addition, I have attended several courses on pedagogical techniques.

Experience with teaching, supervision and examination:

2019-present EMBO Practical Course: Current Methods in Cell Biology
32 students.
Lecturer; I give a lecture on lipidomics and its applications in cell biology.

2013-present FF503 Chemistry, Biology and Molecular Biology (20 ECTS)*
Approx. 350 B.Sc. students.
Lecturer; I introduce students to the thermodynamics of living systems, biological membranes and energy metabolism (glycolysis, oxidative phosphorylation and photosynthesis). I teach this course together with other 8 colleagues.
2010-present FF501: First year project (10 ECTS)*
Approx. 4 B.Sc. students.
Instructor; introduction to lipid mass spectrometry for first year students.

2014-presentBMB822 Modern trends and technologies in molecular cell biology (15 ECTS)
Approx. 35 M.Sc. students.
Lecturer; I introduce students to basic tenets of mass spectrometry, lipidomics and its applications in cell biological research. The course is taught together with other colleagues at our department.

2010-2017 BMB532 Fundamental biochemistry (10 ETCS)*
Approx. 150 B.Sc. students.
Course organizer, lecturer and responsible for exercises; I taught the students about the molecular mechanisms underpinning the citric acid cycle, oxidative phosphorylation, fatty acid oxidation, lipid biosynthesis and hormonal regulation of whole-body energy metabolism. This course was taught with three other colleagues.

2010-2012 BMB804 Molecular mechanisms in eukaryotic metabolism (5 ETCS)*
Approx. 16 M.Sc. students.Lecturer; I introduced the students to the molecular mechanisms used for regulation of lipid metabolism (incl. transcriptional, enzymatic, post-translations regulation) and moderated the students own presentations of relevant scientific literature. This cause was taught together with three other colleagues.

2010BMB515 Biomolecular mass spectrometry
Approx. 24 M.Sc. students.
Lecturer; I taught the students about mass spectrometry and lipid analysis. This course was taught with three other colleagues.

2009BMB202 Protein purification
Approx. 16 M.Sc. students
Instructor; I assisted students in purification of fatty acid synthase from mammary glands of cow.

I am/have been personally involved in planning the structure and scientific content of courses marked with asterisks (*).

Methods, materials and tools:

My teaching has included lectures in lecture halls, lectures in classrooms, and personal supervision during both laboratory and theoretical computer-based exercises. For each type of teaching activity, I consciously try to make use of appropriate didactic tools to activate the students in order to improve their deep-learning. In my lectures I typically communicate concepts through a combination of PowerPoint presentations, animations, and drawing processes on the blackboard. As of February 2014, I have implemented "clicker questions" in my lectures as an additional didactic tool to activate the students and simultaneously survey the impact of my teaching.
To assist student's learning in BMB532 Fundamental biochemistry, I have personally designed over 100 multiple choice tests and multiple answer tests in the online Blackboard system. These tests include both classical text-based questions where the student can select a series of potential answers, and graphical depictions of biochemical reactions where the student has to select the correct reaction product(s) or substrate(s). These tests are related to specific book chapters but the questions can also be randomized. Each question and the possible answers are always randomized such that student is required to actively decide about the selected answer(s), and not just memorize the layout.
I have experience with designing and executing both oral examinations (BMB804) and written, digital examinations

(BMB532 (150 students), FF503 (400 students)). I have served as both external and internal examiner on several occasions: Internal examiner: MSc thesis and BSc thesis defenses, and individual projects. External Examiner: 7 PhD thesis defenses.
Since 2009 I have supervised and graduated several BSc students, MSc students, laboratory technician students, and PhD students. Moreover, I continuously engaged training and coaching postdoctoral scientists.