Teaching

2016-til stede	MM554 Matematik for Biologi - Efterår
2016	IAST801 Models and Inference in Survival Analysis
2016-til stede	MM556 Matematik og statistik for farmaci (Undervisere) - Efterår
2016-2021	ST813 Statistisk Modellering (Undervisere) - Forår
2016-2021	ST523 Statistisk Modellering (Undervisere) - Forår
2013-2015	FF506 Matematik og Statistik for Biologi og Farmaci - Efterår
2015	ST808 Multivariate Analysis and Chemometrics
2014	ST502 Statistical Modelling (Lecturer) - Spring
2013	ST514 Multivariate Analysis (Teaching Assistant) - Spring

Internal Censor

2022	ST523 Statistisk Modellering
2015-2020	ST815 Applied Statistics
2015-202	ST811 Multivariate Statistical Analysis
2015-2019	ST804 Computational Statistics
2014	ST505 Statistical Simulation

Teaching at other institutions

2015	BaSTA workshop (Lecturer). BES annual Symposium “Demography Beyond the Populaiton,” University of Sheffield, UK (23 March)
2013	IDEM288 Bayesian Methods in Animal Demography (Lecturer), International Advanced Studies in Demography, Max Planck Institute for Demographic Research, Rostock, Germany (Nov. 2013)
2013	BaSTA workshop (Lecturer). Evolutionary Demography Society first meeting, University of Southern Denmark, Odense, Denmark (10-11 Nov.)
2011	EDSD Computer Programming for Demographers (Lecturer), European Doctoral School of Demography, Max Planck Institute for Demographic Research, Rostock, Germany. (Aug.- Sept. 2011)
2011	Hierarchical Bayesian methods in ecology (Lecturer). Biology Department, University of Sherbrook (March)
2008	Hierarchical Bayesian Methods for Demography (lecturer). Max Planck Institute for Demographic Research, Rostock, Germany (Oct.)
2006-2008	Models for Environmental Data (Teaching Assistant), Nicholas School of the Environment, Duke University, USA (Spring semester)
2006-2007	Applied Differential Equations (Teaching Assistant), Nicholas School of the Environment, Duke University, USA (Fall semester)
2004	Applied Population Ecology (Teaching Assistant), Nicholas School of the Environment, Duke University, USA (Spring semester)
1998	Conservation Biology (Teaching Assistant), Instituto de Ecologia, UNAM, Mexico

Student Supervision

2016	Andreas Risskov Sørensen. Degree: Bachelor in Applied Mathematics. Role: Supervisor
2016	Rune Reinhart Olsen. Degree: Bachelor in Mathematical Economy. Role: Supervisor
2015-2016	Burhan Yasin Kiyakoglu. Degree: Masters in Applied Mathematics. Role: Supervisor. University of Southern Denmark
2014-2017	Francisco Villavicencio Goula. Degree: PhD in Mathematics. Role: Supervisor. Department of Mathematics and Computer Science and Max-Planck Odense Center on the Biodemography of Ageing, Odense, Denmark.
2014-2017	Johanna Stärk. Degree: PhD in Biology. Role: Co-supervisor. University of Southern Denmark.
2014-2015	Alix Eva Aliaga. Degree: Masters in Biology. Role: Co-supervisor. University of Southern Denmark
2014-2015	Emil Nygaard Guttesen. Degree: Masters in Biology. Role: Supervisor. University of Southern Denmark.

Teaching Portfolion

1. Formal educational training

I have completed sthe SDU Lecturer Training Programme.

2. Administrative tasks relating to education

I am Responsible for International Students for Mathematics and Applied Mathematics, and I was campus coordinator for the Max-Planck Odense Center at SDU.

3. Experience of study programmes, supervision and examinations

I am the main lecturer for the courses FF506 *Mathematics Statistics and Physics for Biologists and Pharmacists* (5 ECTS, undergraduate), and ST813 *Statistical Modelling* (10 ECTS, masters). I have also acted as the main lecturer for the undergraduate course ST502 *Statistical Modelling* (5 ECTS) and for the masters course ST808 *Multivariate Analysis and Chemometrics*. I have successfully supervised first year projects for undergraduate students in Mathematics, Applied Mathematics and Computer Sciences, and have supervised the independent study activity *Applications of Mathematical Demography to Wildlife Studies* (5 ECTS). I have acted as internal examiner for the courses ST516 / ST804: *Computational Statistics*, ST505: Statistical Simulation, ST514/ST811 *Multivariate Statitical Analysis*, and ST520 *Applied Statistics*. I have co-supervised two masters students that defended successfully their dissertations in 2015, while I am currently supervising two undergraduate students in Mathematics and Mathematical Economy, one Masters student in Applied Mathematics, one PhD student in Mathematics and I am co-supervisor for one PhD in Biology.

4. Methods, materials and tools

In the last two years I have implemented the method of flipping the classroom for the course FF506 *Mathematics, Statistics and Physics for Biologists and Pharmacists.* The course averages 160 students every year, most of which do no see mathematics and its applications as viable tools for their career. To stimulate their enthusiasm towards learning mathematics, I have organized the course into a study phase previous to the lectures during which students watch videos, read handouts and do exercises. During the lectures, our focus is on filling up their knowledge gaps by active learning and exemplars relevant to their careers. I complement their learning experience by organizing them in groups during the exercise sessions to solve mathematics problems with relevant applications to biology and pharmacy. The course combines learning of formal mathematical notation and concepts but with a strong link to applications relevant to biological systems. Since the course is taught in English and the concepts and notation are new to them, I give office hours every week, which allows students to have a one-to-one dialog with me and with the teaching assistants.

5. Reflections on your own teaching practice and future development including student evaluations

I believe that teaching in general, and teaching mathematics and its applications in particular, requires a constant dialog between the students and the teacher. It is fundamental to bridge the gap between the students fear and reluctance to learn what they believe to be complex concepts and the invaluable tools that mathematics provide them with. To achieve this goal, it is fundamental to reach a good balance between applications, exemplars and challenging problems, while providing all the tools necessary to the students. Activation in and outside the classroom is key to stimulate the students and to encourage independent learning. This can only be achieved by providing the students with the tools necessary such as focused handouts, videos, and appropriate exercises. In class, stimulation needs to be a two-way avenue, where students are encouraged to participate not only by asking questions but by providing answers to key concepts, solving in class problems and having a dialog with their peers.

I organized an anonymous midterm course evaluation for the course FF506 during the 2014 Fall semester. The results of the midterm evaluation were positive but they also allowed us to improve several aspects of the course based on this feedback. For instance, many students were having a hard time understanding the notation and some of the more advance concepts. These problems were partly due to the fact that the lectures were in English, while we were teaching them a more formal level of mathematics. To help them tackle this, we asked the students to produce a wiki in groups where they researched all the concepts, notation and terms they did not understand and provided their own definition and a translation to Danish. Other students felt that I spent a lot of time re-explaining concepts during the lectures, making them at times seemingly slow. To solve this, I started having office hours after the lectures so students could have a one to one interaction with me, and we could then spend as long as necessary reviewing difficult concepts. The teaching assistants were also available in case the students wanted to have this interaction in Danish.

In terms of the evaluation and to give the students a fair chance of succeeding in the course, I have divided their final grade into the following assessments: 60% based on three exams; 20% based on quizzes performed every two weeks in class based on the material they studied during the week; 20% based on their group oral presentations of the exercises. In addition, the best three wikis were rewarded at the end of the semester.