

## Teaching portfolio

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### Formal educational training:

Basic Course for Newly Employed Scientific Staff, Faculty of Health Sciences, SDU, Spring 2002 (equivalent to course in pedagogy for assistant professors).

META Workshop on Problem Based Learning (PBL), SDU, Autumn, 2002.

### Experience with teaching, supervision and examination:

Since 1998 I have been teaching courses in Basic/Applied Statistics (public health, biology, molecular biology, biomedicine, biological anthropology), Multivariate Statistics (sciences in general), Biometry (morphometrics), Chemometrics (chemical engineering), Advanced Statistics (public health, sciences in general), Population Biology (genetics, ecology, biodemography), Epidemiology (public health), Evolution (phylogeny), Human Evolution. Courses typically courses have been 5 ECTS. Level: both bachelor and master. Epidemiology (public health), Evolution (phylogeny), Human Evolution. Courses typically courses have been 5 ECTS. Level: both bachelor and master. Epidemiology (public health), Evolution (phylogeny), Human Evolution. Courses typically courses have been 5 ECTS. Level: both bachelor and master. Population Biology (genetics, ecology, demography etc.), Population Biology (genetics, ecology, demography etc. Epidemiology (public health), Evolution (phylogeny), Human Evolution. Courses typically courses have been 5 ECTS. Level: both bachelor and master.

Over the years I have been supervisor on 4 bachelor theses, 16 master theses and 4 PhD theses. In addition I have been supervisor on several individual study projects, including company projects.

I have been external examiner in Biostatistics at the Faculty of Health Science, University of Copenhagen, and external evaluator at the Institute of Archaeology, University of Lund.

### Administrative tasks related to education:

From 2006 onwards I have been member of the institute teaching committee at IMADA. The board handles questions about curricula, merit transfer, problems with specific courses, etc. 2013 – 2015 I have been chairman of the committee, and in that capacity responsible for the development of new study programmes in Mathematics, Applied Mathematics, and Computer Science, including coordination with other study programmes.

From 2014 onwards I have been IMADA's representative in the Study Board of the Faculty

of Sciences, SDU, and from May 2019 I have been chairman of the Study Board.

In Autumn/Winter 2022 I completed "Basiskursus i uddannelsesledelse" offered by AEU – Administrativ Efteruddannelse for Universitetsansatte.

During 2001-2002 I was involved in the development of the curriculum of the at that time newly started study programme in Public Health Science at SDU, campus Esbjerg.

For most of the courses listed below, I have been/am responsible teacher. I have personally written course description, decided on course content, textbooks, supplementary material (scientific papers, notes etc.), course format (lectures/exercises/seminars), and exam format. In the courses taught by teams, I have personally written course description, decided on course content, textbooks, supplementary material (scientific papers, notes etc.) for my parts of the courses, whereas course and exam formats have been developed in the team. All details have of course been developed and decided upon in due dialogue with the respective departments and study boards.

### **Methods, materials and tools:**

Reviewer on textbooks in statistics and mathematics:  
Oxford University Press  
Blackwell Science

Contributions to textbooks: Three chapters in Lynnerup, N., Bennike, P. & Iregren, E. (eds). *Biologisk Antropologi med Human Osteologi*, Gyldendals Forlag, Copenhagen.  
Chapter 6: Antropometri  
Chapter 7: Non-metriske træk  
Chapter 16: Det Osteologiske Paradoks - Et identifikationsproblem

Material and manual for exercise in phylogeny reconstruction using R, used in first year course in Biology, SDU.

*Statistics for Biological Anthropology using SPSS.2023 (work in progress).*

### **Educational awards:**

Teacher of the Year, at the Faculty of Health Sciences, SDU, 2005.

### **Reflections on teaching practice:**

The basis of my philosophy as a university teacher is as follows: the main task is to convey to the students the way of thinking behind active academic, intellectual work, as well as the concrete tools for doing this. They should understand that doing science is a special human activity. In order to achieve this, I use a style of teaching where the level of complexity is gradually progressing, taking into account the specific level of the students at different stages in the curriculum, as well as explicitly insisting on the ever increasing responsibility of the students for their own learning and formation. This also entails that the process develops so that learning consists more and more of two-way interaction, the further the students get in the study programme. In the end, the goal for me is to keep the students

scientifically curious, so that they enter a stage of life-long learning. They should genuinely be Homo sapiens, thinking humans. Another important aspect of this philosophy is that, at a certain level, the students should be able to pass on their knowledge to peers, colleagues, and, not least, the general lay public, the latter in a non-technical, but still not too simplified language. Training students in using their native language in science, and not just English, is also important.

In the training in quantitative methodology, I have presented the students not only with the standard textbook examples, but also deliberately included samples and data representing numbers and figures that do not follow the usual assumptions, but can still be analysed in a proper way. In the actual contexts I make the students reflect on the material, not just in order to do a proper analysis, but also actively consider uncertainties, understanding what bias is and the sources of bias, and based on that present a well-founded interpretation in the given context, biological, epidemiological or otherwise. The students should be able to not only replicate the “automatic” use of established analytical (statistical) tools, but also evaluate and criticise these tools.

In the actual course work, I have used the basic philosophy as presented above for developing the content, material (textbook, compendia, exercises, etc.), and the combination of lectures, exercises, seminars, and projects comprised in the courses. I have always found it very important to develop the courses in dialogue, not only with colleagues but also the students, both during the course and in the overall evaluation at the end of the course. For me the evaluations have always been an important and useful tool for developing, amending, and changing course contents as well as my own performance.