

## Teaching portfolio

**1. Teaching CV: A list of teaching and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD). Please state the teaching method used (e.g. lecture, class teaching, exercises, supervision, examination, coexamination, distance teaching, internet-based teaching and evaluation of teaching). Please also indicate the language of instruction.**

Danish abbreviations for terms: F = spring, S = summer, E = autumn, V = winter. If the term is followed by "r", this indicates that it is a reexamination. Example: V21-22r is the reexamination in winter 2021-2022.

For SDU courses, the level is indicated by the course code (5XX = Bachelor's course, 8XX = Master's course).

### Current and past teaching (Aalborg University - AAU)

Lecturer:

- Applied Engineering Mathematics, 5 ECTS, Esbjerg (E21, E22, E23, E24)
- Calculus (Danish), 5 ECTS, Esbjerg (E22, E23, E24)
- Calculus (English), 5 ECTS, Esbjerg (E21, E22, E23, E24)
- Linear Algebra (Danish), 5 ECTS, Aalborg/Esbjerg (F22, F23, F24)
- Linear Algebra (English), 5 ECTS, Esbjerg (F22, F23, F24)
- Mathematical Modelling and Numerical Methods, 5 ECTS, Esbjerg (E23, E24)

Main supervisor:

- Master's Thesis in Risk and Safety Management, 30 ECTS, Esbjerg (F24, E24)

Co-supervisor:

- Semester Projects for M.Sc. in Technology (Risk and Safety Management):
  - 1st Semester: Industry Standards and Legislation, 15 ECTS, Esbjerg (E23, E24)
  - 3rd Semester: Operational Risk Management in Projects, 15 ECTS, Esbjerg (E23, E24)

Internal co-examiner:

- Applied Statistics (Danish), 5 ECTS, Esbjerg (V21-22, V21-22r, V22-23, V22-23r, V23-24, V23-24r)
- Applied Statistics (English), 5 ECTS, Esbjerg (V21-22, V21-22r, V22-23, V22-23r, V23-24, V23-24r)
- Applied Statistics and Probability Theory, 5 ECTS, Esbjerg (V23-24, V23-24r)
- Calculus (Danish), 5 ECTS, Aalborg (V21-22r)
- Calculus (Danish), 5 ECTS, Esbjerg (V21-22)
- Probability Theory, Stochastic Processes and Applied Statistics, 5 ECTS, Esbjerg (V21-22, V21-22r, V22-23, V22-23r, V23-24, V23-24r)
- The Mathematical Foundations of Computer Science, 5 ECTS, Aalborg (S24, S24r)
- The Theoretical Foundations of Computer Science, 5 ECTS, Aalborg (V21-22)

### Past teaching (University of Southern Denmark - SDU)

Lecturer:

- Applied Statistical Modelling, 5 ECTS, Odense (S19)
- Frequentist and Bayesian Inference for Mixed Effects Models, 5 ECTS, Odense (S19)
- MM536 Calculus for Mathematics, 10 ECTS, Odense (E21)
- MM558 Calculus 2, 5 ECTS, Odense (E21)
- Preparatory Mathematics Course for Data Science, 0 ECTS, Odense (S19, S21)
- ST520 Applied Statistics, 5 ECTS, Odense (F20, F21)
- ST808 Multivariate Data Analysis and Chemometrics, 5 ECTS, Odense (E20)

Teaching assistant (group instruction) or guest/substitute lecturer:

- Advanced Statistical Tools, 7.5 ECTS, Esbjerg (E18)
- BMB546 Cellular Evolution, 5 ECTS, Odense – guest lecture on evolutionary computation (F21)
- Databases from SB2-ORG-U1/I-ORG2-U1 Organization Oriented Software Development, 5 ECTS, Odense (F13)
- DM505 Database Design and Programming, 5 ECTS, Odense (F13)
- DM519 Concurrency Programming, 5 ECTS, Odense (F15)
- DM536 Introduction to Programming, 5 ECTS, Odense (E13)
- DM537 Object-Oriented Programming, 5 ECTS, Odense (E12, E13)
- DS803 Statistics for Data Science, 5 ECTS, Odense (E20)
- FF502 Physics and Mathematics: Methods and Models, 20 ECTS, Odense (S14)
- FF506 Mathematics, Statistics and Physics for Biology and Pharmacy, 10 ECTS, Odense (E13, E14, E15)
- MM533 Mathematical and Numerical Analysis, 10 ECTS, Odense (F17, F18)

- MM557 Partial Differential Equations and Complex Analysis, 5 ECTS, Odense (F21)
- ST514/ST811/DS805 Multivariate Statistical Analysis, 5 ECTS, Odense (F17, F18, F20, F21)
- ST517/ST518 Probability and Random Variables, 5 ECTS, Odense (F14, E15)
- ST520/ST815 Applied Statistics, 5 ECTS, Odense (F15, F16, F17, F18)
- ST521 Mathematical Statistics, 10 ECTS, Odense (E15)
- ST523/ST813 Statistical Modelling, 10 ECTS, Odense (F18, F19, F21)
- ST808/K-MDA-U01 Multivariate Data Analysis and Chemometrics, 5 ECTS, Odense (E15, E16, E17, E18, E19, E20)

Supervisor:

- FF501 First Year Project, MAT-01: Analysis of Correlated Data, 10 ECTS, Odense (F20)
- FF501 First Year Project, MAT-02: Beta Regression for Modelling Rates and Proportions, 10 ECTS, Odense (F20)
- Individual Study Activity: Vector Calculus, 5 ECTS, Odense (E21)

Internal co-examiner:

- FF501 First Year Project, MAT-05: Læring af funktionsbegrebet i og udenfor matematik, 10 ECTS, Odense (S20)
- ST514/ST811/DS805 Multivariate Statistical Analysis, 5 ECTS, Odense (S20, S20r, S21, S21r)

### External examiner tasks

External examination at Danish universities:

- Department of Mathematical Sciences, University of Copenhagen. Master's Thesis in Statistics, 30 ECTS (S22, S23, S23r)
- Department of Mathematical Sciences, University of Copenhagen. Mathematical Statistics, 15 ECTS (S22, S22r)
- Department of Mathematical Sciences, University of Copenhagen. Mathematical Statistics, 7.5 ECTS (S23, S23r, S24)
- Department of Mathematical Sciences, University of Copenhagen. Probability Theory and Statistics, 7.5 ECTS (V22-23, V22-23r, V23-24)
- Department of Plant and Environmental Sciences, University of Copenhagen. Master's Thesis in Statistics, 30 ECTS (S23)

External examination at Danish vocational and professionally oriented institutions:

- Cphbusiness, Copenhagen Business Academy, Kgs. Lyngby. 2nd Semester Project, Professional Bachelor's Programme in Data Analysis, 20 ECTS (V22-23r)
- Business Academy SouthWest, Esbjerg. First-Year Exam, AP Programme in Computer Science, 60 ECTS (S22, S22r, S24r)
- Business Academy SouthWest, Esbjerg. Final Exam Project, AP Programme in Computer Science, 15 ECTS (V23-24, S24r)
- Business Academy SouthWest, Esbjerg. Bachelor's Project, Professional Bachelor's Programme in Software Development, 15 ECTS (E22)
- Business Academy SouthWest, Esbjerg. The subject element *Development Environments*, Professional Bachelor's Programme in Web Development, 10 ECTS (S24r)
- Business Academy SouthWest, Sønderborg. Final Exam Project, AP Programme in Computer Science, 15 ECTS (F24)
- Business Academy SouthWest, Tønder. First-Year Exam, AP Programme in Computer Science, 60 ECTS (S23r)
- IBA International Business Academy, Kolding. The subject element *Application Development II*, Professional Bachelor's Programme in IT Architecture, 17.5 ECTS (S24r)
- UCL University College, Odense. First-Year Exam, Part 2, AP Programme in Computer Science, 35 ECTS (V22-23)

**2. Study/programme administration and management: Experience in programme management and coordination. A list of study administration tasks, e.g. study board membership, chair of study board, semester or course coordinator, accreditation tasks, etc. Experience in planning teaching activities. Experience in programme development. Participating in committees and commissions etc. on education issues.**

Former student representative (2016-2018) and deputy chairman (2018) of the Study Board of Science at the University of Southern Denmark.

**3. Formal pedagogical training: A list of completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc. Written assessment from the course in university pedagogy for assistant professors. Participation in conferences on pedagogy and didactics. Please enclose any documentation of the above, such as course certificates, references, etc**

I have completed the university pedagogical programme (universitetspædagogikum) at Aalborg University (10 ECTS). Compulsory course modules:

- Teaching at a PBL University
- Planning and Implementation of Group Instruction
- The Use of IT and Media for Learning and Teaching
- The PBL Group - Collaboration, Process and Supervision
- Planning, Development and Quality Assurance of Study Programmes

#### **Completed courses offered by the SDU Centre for Teaching and Learning (6.5 ECTS in total)**

Teaching for active learning face to face (2.25 ECTS in total):

- Collaborative learning workshop: Integrating it into your courses (0.25 ECTS)
- Engaging students in group work (0.25 ECTS)
- Interactive lecturing (0.50 ECTS)
- Questioning - how it can support learning, teaching and assessment (0.50 ECTS)
- Supervision - roles and relations (0.75 ECTS)

Teaching for active learning using e-learning (2.25 ECTS in total):

- Activating students through online teaching in Zoom (0.50 ECTS)
- Engage your students with discussion forums, blogs and wikis (0.50 ECTS)
- How to create and use videos for teaching and learning (0.25 ECTS)
- Setting up your course in Blackboard/e-learn.sdu.dk (0.50 ECTS)
- Use student response systems in your teaching - an online course (0.50 ECTS)

Feedback and assessment (1.75 ECTS in total):

- Effective feedback and feedforward (0.50 ECTS)
- Helping students understand assessment - using rubrics, peer review and exemplars (1.00 ECTS)
- MCQ - multiple choice questions in teaching and exams (0.25 ECTS)

Students as learners (0.25 ECTS in total):

- Students' academic writing skills (0.25 ECTS)

**4. Other qualifications: Conference contributions and attendance, contributions to debates, scientific articles on pedagogical issues etc. Peer supervision, editorials, mentoring experience or other types of competence development activities.**

**5. Pedagogical development and research: Development of new courses, teaching materials, teaching methods, examination types or other types of pedagogical development. Didactic and pedagogical research. Cooperation with external collaboration partners.**

I designed two new courses on statistical modelling and inference for PhD students and postdocs from the Department of Biology at the University of Southern Denmark in consultation with a representative from the Department of Biology. Moreover, I designed a preparatory mathematics course for future Master's students in data science at the University of Southern Denmark in consultation with the programme responsible.

I have developed teaching materials for a wide range of courses in mathematics and statistics. In addition, I have worked with active teaching and learning.

**6. References on your teaching skills from superiors or colleagues. Teaching evaluations and any teaching awards received.**

**7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogical development, plans for following up on student feedback/evaluations, etc. Personal reflections on your own pedagogical practice, including objectives, methods and implementation. This should include an analysis and a reasoned description of your pedagogical activities in relation to your pedagogical understanding and student learning. Thoughts on the teaching method at Aalborg University (which is largely based on group-organised project work and problem-based learning)**

**8. Any other information or comments.**