

**Courses during positions in Uppsala**

- 2024 **Reinforcement Learning** *Occasions: 1. Course credits: 5hp/7.5hp. Level: Second cycle studies. Educational activity: Lecturer. Extent: 60h. Teaching language: English. Number of students: 100.*
- 2019–2021, **Advanced Probabilistic Machine Learning** [▷ course homepage](#)  
2023 *Occasions: 4. Course credits: 5hp/7.5hp. Level: Second cycle studies. Educational activity: Course director, examiner, course developer, lecturer, lab assistant, and administrative duties (course development not included, see below). Extent: 120h per occasion (preparation included but not course development, see below). Teaching language: English. Number of students: 70 – 110.*
- 2019, 2021, **Deep Learning** [▷ course homepage](#)  
2023 *Occasions: 3. Course credits: 5hp+3hp. Level: Third cycle studies. Educational activity: Course director, examiner, course developer, lecturer, and administrative duties (course development not included, see below). Extent: 80h per occasion. Teaching language: English. Number of students: 50.*
- 2023 **Introduction to Computer Control Systems** *Occasions: 1. Course credits: 5hp. Level: First cycle studies. Educational activity: Responsible for lab module. Extent: 120h. Teaching language: English. Number of students: 75.*
- 2022 **Modelling of Dynamical Systems** *Occasions: 1. Course credits: 5hp. Level: First cycle studies. Educational activity: Responsible for lab module. Extent: 50h. Teaching language: Swedish. Number of students: 70.*
- 2017-2022 **Statistical Machine Learning** [▷ course homepage](#)  
*Occasions: 7. Course credits: 5hp. Level: Second cycle studies. Educational activity: Course developer, Lecturer, teaching assistant, lab supervisor, exam grading, and administrative duties. Extent: 100h-120h per occasion (2017,2018,2019), 25-50h per occasion (spring 2020, fall 2020, 2021, 2022) (course development not included, see below). Teaching language: English. Number of students: 100 (2017) – 200 (2022).*
- 2016 Fall **Automatic Control II** *Occasions: 1. Course credits: 5hp. Level: Second cycle studies. Educational activity: Teaching assistant and exam grading. Extent: 70h. Teaching language: Swedish/English. Number of students: 100.*

**Courses during PhD candidate program in Linköping**

- 2012, 2013 **Sensor Fusion** *Occasions: 2. Course credits: 6hp. Level: Second cycle studies. Educational activity: Teaching assistant, lab supervision, exam grading, and administrative duties. Extent: 175-225h per occasion. Teaching language: English. Number of students: 50.*
- 2011 Fall **Control Project Laboratory** *Occasions: 1. Course credits: 12hp. Level: Second cycle studies. Educational activity: Supervisor for a student group. Extent: 50h. Teaching language: Swedish. Number of students: 50.*
- 2011 **Automatic Control Y/D** *Occasions: 1. Course credits: 6hp. Level: First cycle studies. Educational activity: Teaching assistant, lab supervision, exam grading, and administrative duties. Extent: 110h. Teaching language: Swedish. Number of students: 180.*
- 2011 **Industrial Control Systems** *Occasions: 1. Course credits: 6hp. Level: Second cycle studies. Educational activity: Lab supervision. Extent: 30h. Teaching language: Swedish. Number of students: 60.*

- 2010–2014 **Optimal Control** *Occasions: 3. Course credits: 6hp. Level: Second cycle studies. Educational activity: Teaching assistant, lab supervision, and exam grading. Extent: 150-200h per occasion. Teaching language: Swedish. Number of students: 30-40.*
- 2010 **Automatic Control** *Occasions: 1. Course credits: 6hp. Level: First cycle studies. Educational activity: Teaching assistant, lab supervision, and exam grading. Extent: 175h. Teaching language: Swedish. Number of students: 100.*

### Courses prior PhD candidate program in Linköping

- 2009 **Optimization** *Occasions: 1. Course credits: 6hp. Level: First cycle studies. Educational activity: Teaching assistant, lab supervision, and exam grading. Extent: 175h. Teaching language: Swedish. Number of students: 150.*
- 2007, 2008 **Calculus, B.Sc. course.** *Occasions: 2. Course credits: 12hp. Level: First cycle studies. Educational activity: Supplemental instructor. Extent: 50h per occasion. Teaching language: Swedish. Number of students: 150.*
- 2006, 2009 **Linear Algebra** *Occasions: 2. Course credits: 8hp. Level: First cycle studies. Educational activity: Mentoring a group of students. Extent: 75h per occasion. Teaching language: Swedish. Number of students: 100.*

### • PEDAGOGICAL EDUCATION

- 2022 Assessment, grading and feedback (1 week)
- 2022 Supervisory course: Teaching and Assessing Academic Writing (0.5 week)
- 2020 Scholarly Teaching in Science and Technology (2 weeks)
- 2020 Supervision of PhD students (3 weeks)
- 2011 Teaching in higher education, Step 1: Learning, instructing and knowledge (4 weeks)

### • OTHER PEDAGOGICAL MERITS

#### Revision of courses

- 2023 Was appointed by the department to do a coordinated revision of all the courses in machine learning and artificial intelligence at the department. The revision included coordination between course directors, program coordinators, director of studies and head of education.

#### Course development work

- 2019, 2021, **Deep Learning** Developed together with colleagues a faculty-common PhD course in deep learning. As course director, I was the main responsible for administrating the course development. I developed four lectures and one hand-in assignment. The course received grants from the faculty, 100 000 - 150 000 SEK per course instance.
- 2023
- 2019–2021, **Advanced Probabilistic Machine Learning** Developed with colleagues a continuation course in probabilistic machine learning for fourth/fifth-year engineering students and second-year MSc students. I have developed both lectures (8) and exercise material (4 sessions). As course director, I was the main responsible for the development and the examination methods: oral exam (2019, 2020) and computer-based written exam (2021, 2022, 2023).
- 2023
- 2016–2018 **Statistical Machine Learning** Developed with colleagues a broad introductory course in statistical machine learning for third/fourth-year engineering students and first-year master students. Developed two lectures, one lab, and parts of lecture notes, that eventually evolved into a published course book, see below. Together with one other colleague, I had the shared responsibility for constructing all exercises to be solved by students in the problem-solving sessions (total 10 sessions). Roughly half of these exercises are computer-based.

2013      **Sensor Fusion** Developed with two colleagues a new lab about orientation estimation with inertial sensors. This course development project resulted in two peer-reviewed scientific publications [J4, C9].

2010, 2011   **Optimal Control** Compiled an exercise compendium based on existing exercise material, to which I have also done updates, such as added exercises, corrected typos, etc.

#### **Course material**

2017–2022   **Machine Learning - A First Course for Engineers and Scientists**   ▷ [link](#)  
Developed and published together with colleagues a course book aimed for an introductory course in machine learning, see also [B1].