MASTER’S DEGREE PROGRAM
IT PRODUCT DEVELOPMENT
MASTER’S DEGREE PROGRAM

- Structure of the Master’s Degree Program
- Study abroad
- Admission
- Practical information

Slides: www.cs.au.dk/studieorientering
MASTER’S DEGREE PROGRAM

• Structure of the Master’s Degree Program
  • Basis: Bachelor’s degree
  • Box diagram
  • Specializations
  • Elective courses
• Study abroad
• Admission
• Practical information
## IT PRODUCT DEVELOPMENT BACHELOR’S

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>ECTS</th>
<th>Course</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Sem</td>
<td>Foundations of IT Product Design</td>
<td>10</td>
<td>Introduction to Programming</td>
<td>10</td>
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<tr>
<td></td>
<td>Calculus alpha</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Sem</td>
<td></td>
<td></td>
<td>Database Systems</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The Web of Things</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>IT Product Design Project</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Sem</td>
<td>Physical Computing</td>
<td>10</td>
<td>Human-Computer Interaction</td>
<td>10</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Software Engineering and Architecture</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th Sem</td>
<td>Computer Architecture, Networks and Operating Systems</td>
<td>10</td>
<td>Experimental System Development</td>
<td>10</td>
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</tr>
<tr>
<td></td>
<td>Introductory Statistics and Data Analysis Using R</td>
<td>5</td>
<td>Organizing and Business Models for IT Innovations</td>
<td>5</td>
</tr>
<tr>
<td>5th Sem</td>
<td>Design as Products, Services, Systems and Experiences</td>
<td>10</td>
<td>Distributed Systems and Security</td>
<td>10</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Elective (recommended: Algorithms and Data Structures)</td>
<td>10</td>
<td>Philosophy and Ethics of Information Technology</td>
<td>5</td>
</tr>
<tr>
<td>6th Sem</td>
<td>Shape-Changing Objects and Spaces</td>
<td>10</td>
<td>Bachelor’s Project</td>
<td>15</td>
</tr>
</tbody>
</table>

- Taught in Danish, except for courses marked 
- Bachelor in IT Product Development or similar is prerequisite for master level courses in IT Product Development

### Course Markings
- Mathematics
- IT Product Development (only)
- IT Product Development (and CS)
- Elective
IT PRODUCT DEVELOPMENT MASTER’S

<table>
<thead>
<tr>
<th>1st sem (Fall)</th>
<th>Elective (10 ECTS)</th>
<th>UBI 1 (10 ECTS)</th>
<th>Design 1 (10 ECTS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Sem (Spring)</td>
<td>UBI 2a (5 ECTS)</td>
<td>Design 2a (5 ECTS)</td>
<td>Innovation Project (20 ECTS)</td>
</tr>
<tr>
<td>3rd Sem (Fall)</td>
<td>Study abroad / elective courses (30 ECTS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th Sem (Spring)</td>
<td></td>
<td>Thesis (30 ECTS)</td>
<td></td>
</tr>
</tbody>
</table>

- Program must include all courses
- Program must include at least one of HCI 1, HCI 3, UBI 3

![Shared with CS](AARHUS UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE)

**Socio-Technical Design**
- Design 1
- Design 2a
- Design 3

**HCI**
- HCI 1
- HCI 2
- HCI 3

**Ubiquitous computing and Interaction**
- UBI 1
- UBI 2a
- UBI 2b
- UBI 3
# Human-Computer Interaction

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Title</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Sem (Fall)</td>
<td>Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases (10 ECTS)</td>
<td>OB</td>
</tr>
<tr>
<td>2nd Sem (Spring)</td>
<td>Designing Interactive Technologies (10 ECTS)</td>
<td>SB</td>
</tr>
<tr>
<td>3rd Sem (Fall)</td>
<td>Multimodal Interaction (10 ECTS)</td>
<td>EH</td>
</tr>
</tbody>
</table>

• Semesters are independent – can be taken in any order

## Computer Mediated Activity

- Clemens Nylandsted Klokmose
- Eve Hoggan
- Henrik Korsgaard
- Olav Bertelsen
- Susanne Bødker
SOCIO-TECHNICAL DESIGN

<table>
<thead>
<tr>
<th>Semesters</th>
<th>Courses</th>
<th>Credits</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st sem (Fall)</td>
<td>Social and Aesthetic Interaction Design (10 ECTS)</td>
<td>10</td>
<td>PGK</td>
</tr>
<tr>
<td>2nd Sem (Spring)</td>
<td>Designing Wearables (5 ECTS)</td>
<td>5</td>
<td>MP</td>
</tr>
<tr>
<td>3rd Sem (Fall)</td>
<td>Sustainable Design and Production (10 ECTS)</td>
<td>10</td>
<td>DR</td>
</tr>
</tbody>
</table>

- First 15 ECTS are mandatory courses in IT Product Development Master’s Program
- Semesters are independent – can be taken in any order

**Socio-Technical Design**
- Majken Kirkegård Rasmussen
- Minna Pakanen
- Peter Gall Krogh

**Lifecycle Design and Manufacturing**
- Devarajan Ramanujan
# Ubiquitous Computing and Interaction

<table>
<thead>
<tr>
<th>1st sem (Fall)</th>
<th>Building the Internet of Things with P2P and Cloud Computing (10 ECTS)</th>
<th>NOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Sem (Spring)</td>
<td>Augmented Reality (5 ECTS)</td>
<td>KP</td>
</tr>
<tr>
<td></td>
<td>Advanced Augmented Reality Project (5 ECTS)</td>
<td>KP</td>
</tr>
<tr>
<td>3rd Sem (Fall)</td>
<td>Data Visualization (10 ECTS) OR</td>
<td>H-JS</td>
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<tr>
<td></td>
<td>Deep Learning for Visual Recognition (10 ECTS)</td>
<td></td>
</tr>
</tbody>
</table>

- First 15 ECTS are mandatory courses in IT Product Development Master’s Program
- Semesters are independent – can be taken in any order

**Ubiqitous Computing and Interaction**
- Hans-Jörg Schultz
- Kaj Grønbæk
- Ken Pfeuffer
- Marianne Graves Petersen
- Niels Olof Bouvin
ELECTIVE COURSES (FALL)

In addition to earlier mentioned specialization courses

- **Systems Security** (10 ECTS)
- **Interdisciplinary Digital Entrepreneurship** (10 ECTS)
- **Project Work in IT Product Development** (5 or 10 ECTS)
- **Erhvervsprojekt / Vocational Training Project at the Department of Computer Science** (10 ECTS)
  - Collaboration with a company
  - [https://studerende.au.dk/studier/fagportaler/datalogi/projektsamarbejde/cs-project-bank/](https://studerende.au.dk/studier/fagportaler/datalogi/projektsamarbejde/cs-project-bank/)
ELECTIVE COURSES (EXTERNAL)

Courses at other departments:
- Arts
  - Data and Digital Culture (10 ECTS)
  - (Summer:) Game.Play.Design (10 ECTS)

If you fail an exam in an elective course, then that course has become mandatory!
If you have made an erroneous choice of an elective course please contact us for guidance immediately!
MASTER’S DEGREE PROGRAM

- Structure of the Master’s Degree Program
- Study abroad
  - Study abroad semester (30 ECTS)
  - Study abroad summerschool (5-10 ECTS)
- Admission
- Practical information
STUDY ABROAD (30 ECTS SEMESTER)

General information (destinations, deadlines, procedures, etc)

Study Abroad Fair 8 October 2020:
- [http://studerende.au.dk/au-study-abroad-fair/](http://studerende.au.dk/au-study-abroad-fair/)

Application Deadline: 1 December 2020

Selected destination:
- TuE i Eindhoven has a semester from their ID Master module that fits nicely into an AU IT Product Development program:
- Contact: Søren Poulsen

Study abroad information will be updated at the beginning of the autumn semester before next application deadline in December 2021
STUDY ABROAD (30 ECTS SEMESTER)

Credit transfer /course selection

  - Select potential universities based on course offerings.
  - Apply for exchange through MoveON
  - When you have been admitted for exchange at specific university you need **advance approval of courses**.
  - If foreign university allows less than 30 ECTS then top up with summer courses or project work.
  - Update Master’s contract /book an interview.
  - Contact Gudmund/Søren

Other aspects?

STUDY ABROAD (SUMMER SCHOOL)

General information (destinations, deadlines, procedures, etc)


Application Deadline: 15 March 2021
MASTER’S DEGREE PROGRAM

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ADMISSION

- When bachelor completed
- You apply for admission into Master’s Program
  - Deadline 1 March
- ... or apply for admission into PhD studies
- Admission
  - You must actively apply for admission
  - You must actively apply for SU
  - Making a study program (contract) does not suffice
- https://kandidat.au.dk/optagelse/ansoegning/
TEMPORARY ADMISSION

- If you lack X<30 ECTS in your bachelor, you may for a 6 months period take 30-X ECTS courses to be part of your future Master’s Program
- No temporary admission if you still lack a mandatory course and you have failed it twice!
- Never delay (re)examination in a mandatory course!
- This might have SU-related consequences!
Apply for PhD studies!

- [https://phd.nat.au.dk/programmes/computer-science/](https://phd.nat.au.dk/programmes/computer-science/)
- You receive a salary while studying!
- Apply for PhD studies directly following your Bachelor’s degree, during your Master’s studies or following your Master’s degree.
- For deadlines see [https://phd.nat.au.dk/for-applicants/](https://phd.nat.au.dk/for-applicants/)
- Contact Anders Møller for info [http://pure.au.dk/portal/en/amoeller@cs.au.dk](http://pure.au.dk/portal/en/amoeller@cs.au.dk)

**BSc in Computer Science**  
3 years

**MSc in Computer Science**  
2 years

**PhD**  
3 years

**BSc in Computer Science**
MASTER’S DEGREE PROGRAM

• Structure of the Master’s Degree Program
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• Practical information
  • Contracts
  • Signing up for courses
  • ”Fremdriftsreform”
  • Student Guidance
CONTRACTS

- http://kontrakt.nattech.au.dk/

Master’s Contract:

• Complete before signing up for first course in Master’s Program
  • Also in case of temporary admission
  • You may only sign up for courses mentioned in your contract
• Revise at semiannual interviews in April and October
  • http://www.cs.au.dk/~gudmund/interview.html
  • You will have a friendly chat with Marianne, Søren and/or Gudmund

Project Work Contract:

• In addition to signing up for a project work / vocational training project (erhvervsprojekt) you must also make a contract

Thesis Contract:

• Sign at start of thesis work
SIGNING UP FOR COURSES

Sign up:

- January 15 – April 1 for courses in Summer
- May 1-5 for courses in (Summer &) Fall
- November 1-5 for courses in the Spring
- Advance approval of credit transfer is needed for courses from outside Nat-Tech,
- Apply well in advance!
- Advance approval of credit transfer is no guarantee that you will be admitted to the course!

Schedule for elective courses:

- watch out for collisions!
FREMDRIFTSREFORM ("STUDY PROGRESS REFORM")

• If you follow the recommended program of study (30 ECTS per semester), take courses in the correct order (the Box Diagrams) and pass all courses at the ordinary exam or at the first scheduled re-exam then you need not worry about the study progress reform.

• If you fall behind or do not pass a course at the latest by the first reexamination then contact us for advice and guidance on your individual study program.

• If you ignore this advice and believe that "it will be fine", it may have serious consequences!

• If you do not complete your master’s program within six months after the prescribed time you are automatically signed out of the study program / out of the university http://studerende.au.dk/en/studies/subject-portals/computer-science/student-counselling/maximum-duration-and-active-enrolment/.

• If you fail an exam in an elective course, then that course has become mandatory! If you have made an erroneous choice of an elective course please contact us for guidance immediately!
STUDENT COUNSELOR

The student counselor may help you

• Henrik Dalsgaard Henriksen


• Possible topics:
  • Change of study program, delay, leave of absence, withdrawal.
  • Illness.
  • Study regulations, selecting supplementary subjects.
YOU CAN HAVE INFLUENCE!

Join a committee
- Contact the chair
- You may look up current student members on the web

**Education Committee**
- Chair: Marianne Graves Petersen, mgraves@cs.au.dk
- [http://cs.staff.au.dk/boards-and-committees/education-committee/](http://cs.staff.au.dk/boards-and-committees/education-committee/)

**Office Committee**
- Chair: Na Ree Sabina Pagaard Sørensen, nrs@cs.au.dk

**Lab Committee**
- Chair: Søren Poulsen, poulsen@cs.au.dk
- [http://cs.staff.au.dk/boards-and-committees/lab-committee/](http://cs.staff.au.dk/boards-and-committees/lab-committee/)