Master’s Degree Programme
IT Product Development

Revised 31 March 2017
Master’s Degree Programme

- Important choices
- Structure of the Master’s Degree Programme
- Requirements for the study programme
- Admission
- Practical information

- Slides: www.cs.au.dk/studieorientering
Important Choices

- During Master’s degree studies:
  - Specialization?
  - Elective courses?
  - Study abroad?
  - ph.d.?
Master’s Degree Programme

- Important choices
- **Structure of the Master’s Degree Programme**
  - Box diagram
  - Elective courses
- Requirements for the study programme
- Admission
- Practical information
## Structure of Master’s Programme

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 sem</td>
<td>Elective (10 ECTS)</td>
</tr>
<tr>
<td></td>
<td>Building the Internet of Things with P2P and Cloud Computing</td>
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<tr>
<td></td>
<td>Shape-changing Objects and Spaces</td>
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<tr>
<td>2 sem</td>
<td>Augmented Reality</td>
</tr>
<tr>
<td></td>
<td>Urban Intervention</td>
</tr>
<tr>
<td></td>
<td>Innovation Project (20 ECTS)</td>
</tr>
<tr>
<td>3 sem</td>
<td>Study abroad / elective courses (30 ECTS)</td>
</tr>
<tr>
<td>4 sem</td>
<td>Thesis (30 ECTS)</td>
</tr>
</tbody>
</table>

- Elective courses must include one of
  - Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases (10 ECTS)
  - Multimodal Interaction (10 ECTS)
    - Recommended prerequisite: Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases or similar
  - Advanced Data Management and Analysis (10 ECTS)
    - From 2018
Choices

- Select elective courses to build your personal competence profile with a view towards the final thesis writing
- Study abroad: select university and courses to support and strengthen your specialization
- Thesis: you should contact an advisor early (prior semester)
Recent Master’s Theses

- Exploring The Design Space of an Office Chair: Qualities and Challenges of Embedded E-Textile Interaction.
- Augmenting Play Bases.
- Graphene-Based Interaction Design: Open-ended Constructive Play for Children.
- Using Roles in Games to Provide an Engaging and Supportive Co-Experience Among Children.
- Mapping and exploring the retail design space to enhance the in-store shopping experience through IT solutions.
- Printing Functionality. Empowering Designers to Create Interactive Prototypes with 3D Printing.
- Planning and Evaluating Design Process Courses with Public School Students in the Subject Craftsmanship and Design.
- Offering Blind Participants Hands-on Experience in a Design Process.
- Re-Positioning Social Networks to Support Urban Garden Communities.
- Designing Experience First.
- CapFloor: An Interactive Luminous Floor Using Capacitive Sensing.
- A Window into the Soul of Photographer: Learning Photography through haptic Communication.
- HITMACHINE.
- Can E-Paper Advance Local News?
- Collective Intelligence for EV3 Robots. Using Knowledge Sharing to Improve Multi-Agent Exploration of Unknown Complex Environments.
- ScrAPP: Mobile Technologies to Support Sustainability for CNC Cutting Machines in Creative Environments.
Elective Courses (Fall)

- **CS**
  - Distributed Systems and Security (10 ECTS)
    - From 2018
  - Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases (10 ECTS)
  - Multimodal Interaction (10 ECTS)
    - Recommended prerequisite: Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases
  - Advanced Data Management and Analysis (10 ECTS)
    - From 2018
  - Science-based IT Entrepreneurship and Innovation (5 ECTS, Q1)
  - Context awareness (5 ECTS, Q2)

- **ENG**
  - Internet of Things (10 ECTS)

- **Arts**
  - Digital Culture (10 ECTS)
  - Digital Aesthetics (15 ECTS)

- **BSS**
  - Marketing and Consumer Behaviour (10 ECTS)
  - Product development and innovation management (10 ECTS)
  - Employee Emotions, Attitudes & Behaviour (5 ECTS)
Elective Courses

Fall & Spring:

- **CS**
  - Project Work in IT Product Development (5 or 10 ECTS)
    - Experiments/prototypes, empirical work, thesis preparation

- **ASE**
  - GUI programming (I4GUI) (5 ECTS)
  - Smartphone Applications (ITSMAP) (5 ECTS)


- **CS**
  - Identity and Privacy (5 ECTS, summer 2017)
    - Prerequisites: Distributed Systems & Security

- **Arts**
  - Game.Play.Theory (10 ECTS, summer)
    - Identical to Computer game theory (Q3+Q4)
  - Digital Living (10 ECTS, summer)
Elective Courses (Spring)

Spring: (relevant only if you do not follow Box Diagram):

- **CS**
  - Designing Interactive Technologies (10 ECTS)
    - prerequisite: Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases
  - Advanced Augmented Reality Project (5 ECTS, Q4)
    - prerequisite: Augmented Reality, Q3

- **ENG**
  - Modelling and Verification (10 ECTS)

- **Arts**
  - 3D Interaction (10 ECTS)
  - Computer game Theory (10 ECTS)
  - Sound and Interaction (10 ECTS)

- **BSS**
  - Marketing Management (10 ECTS)
Master’s Degree Programme

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Requirements for the Study Programme

- 120 ECTS in total
  - At least 90 ECTS graduate level IT Product Development
  - At least 180 ECTS IT / IT product Development in bachelor + master’s

- Mandatory courses
  - Shape-changing Objects and Spaces (10 ECTS)
  - Building the Internet of Things with P2P and Cloud Computing (10 ECTS)
  - Designing Urban Interventions (5 ECTS)
  - Augmented Reality (5 ECTS)
  - Innovation Project (20 ECTS)

- Restricted elective: at least one of the courses:
  - Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases (10 ECTS)
  - Multimodal Interaction (10 ECTS)
  - Advanced Data Management and Analysis (10 ECTS)

- Thesis (30 ECTS)
Yellow Brick Requirement

- All Programmes (Bachelor or Master’s) must include 60 ECTS passed at Science and Technology, Aarhus University

- This has implications for credit transfer!
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Admission

- When bachelor completed
- You apply for admission into Master’s Programme
- ... or apply for admission into PhD studies
- Admission
  - You must actively apply for admission
  - You must actively apply for SU
  - Making a study programme (contract) does not suffice
- http://kandidat.au.dk/optagelse/adgangskrav/
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 Programme
- 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!
PhD studies?

- Apply for PhD studies!
  - For deadlines see [http://talent.au.dk/phd/scienceandtechnology/opencalls/](http://talent.au.dk/phd/scienceandtechnology/opencalls/)
  - You receive a salary while studying!
  - [http://talent.au.dk/phd/scienceandtechnology/programmes/computer-science/](http://talent.au.dk/phd/scienceandtechnology/programmes/computer-science/)
  - 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)
Master’s Degree Programme

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- **Practical information**
  - Contracts
  - Signing up for courses
  - Study abroad
  - ”Fremdriftsreform”
  - Student Guidance
Contracts

- [http://kontrakt.scitech.au.dk/](http://kontrakt.scitech.au.dk/)

- **Master’s Contract:**
  - Complete before signing up for first course in Master’s Programme
    - 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
    - You will have a friendly chat with Søren & Gudmund

- **Thesis Contract:**
  - Sign at start of thesis work

**NB:** Revised contract templates available from 4 April, 2017
Signing up for courses

- **Sign up:**
  - December 1 – March 15 for courses in Summer
  - May 1-7 for courses in (Summer &) Fall
  - November 1-7 for courses in the Spring
  - Advance approval of credit transfer is needed for courses from outside ST, see [http://studerende.au.dk/studier/fagportaler/datalogi/studievejledning/merit/](http://studerende.au.dk/studier/fagportaler/datalogi/studievejledning/merit/) (apply well in advance!)

- **Schedule for elective courses:**
  - watch out for collisions!
Stay abroad

- General information (destinations, deadlines, procedures, etc)
  - http://studerende.au.dk/studier/fagportaler/datalogi/udlandsophold/

- TuE i Eindhoven has a semester from their ID Master module that fits nicely into an AU IT Product Development program:
  - w3.id.tue.nl/nl/education/learning_activities/programme/master_programme
  - Contact: Søren Poulsen

- Credit transfer
  - Advance approval (ECTS computation may be tricky!)
  - If foreign university allows less than 30 ECTS then top up with
    - Summer courses
    - Project work
  - Update Master’s contract / book an interview
  - Contact Gudmund / Søren

- Questions?
  - Contact Arne Nis Jensen, Ada 120, ajensen@cs.au.dk
Fremdriftsreform (”study progress reform”)

- If you follow the recommended program of study (30 ECTS per semester) and take courses in the correct order (the Box Diagrams) 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 pass minimum 45 ECTS per year or 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/studier/fagportaler/datalogi/fremdriftsreformen/](http://studerende.au.dk/studier/fagportaler/datalogi/fremdriftsreformen/)
Student Counselor

- The student counselor may help you
  - Magnus Høholt Kaspersen

  - Possible topics:
    - Change of study programme, delay, leave of absence, withdrawal
    - Illness
    - Study regulations, selecting supplementary subjects
Information Meetings

Thursday 30 March 2017 (Store Aud, 5510-103):
- 14-15: **IT-Product Development**: Master’s Program
- 15-16: **IT**: Bachelor Program
- 16-17: Computer Science & **IT**: Master’s Thesis

Friday 31 March 2017 (PBA Aud, 5335-016):
- 14-15: Computer Science: Bachelor Program
- 15-16: Computer Science: Master’s Program
Du kan få indflydelse!

- Kom med i et udvalg
  - Henvend dig til formanden
  - Du kan finde nuværende studentermedlemmer på webben
- Uddannelsesudvalg
  - Formand: Gerth Stølting Brodal, gerth@cs.au.dk
  - [http://cs.staff.au.dk/boards-and-committees/education-committee/](http://cs.staff.au.dk/boards-and-committees/education-committee/)
- Lokaleudvalg
  - Formand: Annemette Hammer, ahammer@cs.au.dk
- PR-udvalg
  - Formand: Søren Poulsen, poulsen@cs.au.dk
  - [http://cs.staff.au.dk/boards-and-committees/pr-committee/](http://cs.staff.au.dk/boards-and-committees/pr-committee/)
- Laboratorie-udvalg
  - Formand: 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/)
Efterår
Skitsering og fysisk prototypedesign
Physical Computing
Social og æstetisk interaktionsdesign
Shape-changing objects and spaces
Multimodal Interaction

Forår
IT-Produktdesignprojekt
Bachelorprojekt
Designing Urban Intervention
Innovationsprojekt

labtools@cs.au.dk
labtools@cs.au.dk

- Chomskylab.dk
- Træffetider på Ada-1 (+tlf)
facebook.com/datalogi
www.facebook.com/groups/it.studerende/
facebook.com/SOFAIT
facebook.com/chomskylab

#csaudk #AUdatalogi
Clockwork - Designing For Reflection
Skyline Outlier Ensemble
Exploring The Design Space of an Office Chair: Qualities and Challenges of Embedded E-Textile Interaction.
Augmenting Play Bases.
Graphene-Based Interaction Design: Open-ended Constructive Play for Children.
Using Roles in Games to Provide an Engaging and Supportive Co-Experience Among Children.
Mapping and exploring the retail design space to enhance the in-store shopping experience through IT solutions.
Printing Functionality. Empowering Designers to Create Interactive Prototypes with 3D Printing.
Planning and Evaluating Design Process Courses with Public School Students in the Subject Craftmanship and Design.
Offering Blind Participants Hands-on Experience in a Design Process.
Re-Positioning Social Networks to Support Urban Garden Communities.
Designing Experience First.
CapFloor: An Interactive Luminous Floor Using Capacitive Sensing.
Developing Multi Touch Interactive Visualizations to Explore Big Data.
The Myth of Natural User Interfaces: How Contextual Understanding and Existing Knowledge Lead Towards Natural Interaction