

# MASTER'S DEGREE PROGRAM IT PRODUCT DEVELOPMENT

# MASTER'S DEGREE PROGRAM

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1. Admission
2. Structure of the Master's Degree Program
  - I. Box diagram
  - II. Course Packages
  - III. Elective courses
3. Study abroad
4. External Collaboration
5. Practical information

Link to current slides: [www.cs.au.dk/study](http://www.cs.au.dk/study)

# ADMISSION



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IT PRODUCT DEVELOPMENT MASTER'S  
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# ADMISSION

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- 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 and accept your seat
  - You must actively apply for SU
  - Making a study program (contract) does not suffice
- <https://kandidat.au.dk/optagelse/ansoegning/>

# TEMPORARY ADMISSION

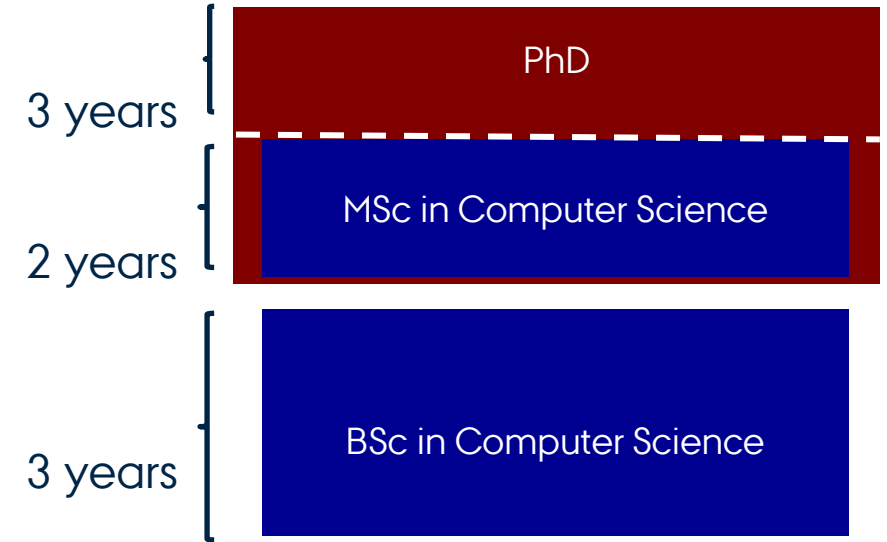
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- If you lack less than 30 ECTS in your bachelor, you may for a 6 months period take up to 30 ECTS courses to be part of your future Master's Program
- You cannot get temporary admission if you still lack a mandatory course and you have failed it twice.
- Never delay (re)examination in a mandatory course.
- If you get temporary admission, it might have SU-related consequences. Remember to clarify the consequences before applying.
- <https://studerende.au.dk/en/studies/subject-portals/computer-science/rules-and-guidelines/temporary-admission-to-the-masters-study-programme>

# APPLY FOR PHD STUDIES!

Apply for PhD studies!

- <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 you Master's studies or following your Master's degree.



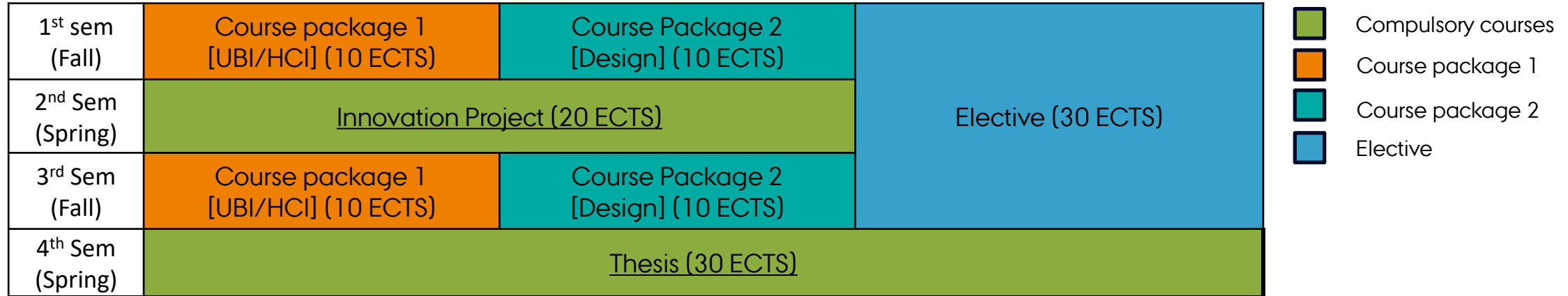
For deadlines see <https://phd.nat.au.dk/for-applicants/>  
Contact Anders Møller for info <http://pure.au.dk/portal/en/amoeller@cs.au.dk>



# BOX DIAGRAM



# BOX DIAGRAM – 2025 AND LATER



## Course packages

Two 20 ECTS course packages .

20 ECTS from:

- Human-Centered Computing
- Ubiquitous Computing and Interaction

20 ECTS from:

- Socio-Technical Design

## Electives

- Recommendation is additional course from the course packages.
- Project work (e.g. in collaboration with a company) is also a possibility.
- Supportive courses for IT Product Development, e.g. from Computer Science or other departments
- There may be requirements for the composition of the study program in connection with possible admission. In this case mandatory courses replace the elective courses (partly).





## Thesis

- Written within the area of one of the course packages



# GOING ABROAD

1 <sup>st</sup> sem (Fall)	Course package 1 (10 ECTS)	Course package 1 (10 ECTS)	Elective (20 ECTS)
2 <sup>nd</sup> Sem (Spring)	<u>Innovation Project (20 ECTS)</u>		
3 <sup>rd</sup> Sem (Fall)	Going abroad (30 ECTS)		
4 <sup>th</sup> Sem (Spring)	<u>Thesis (30 ECTS)</u>		

-  Compulsory courses
-  Course package 1
-  Going abroad
-  Elective

## Course package

*One 20 ECTS course packages when going abroad*

20 ECTS from:

- Human-Centered Computing
- Ubiquitous Computing and Interaction

**OR**

20 ECTS from:

- Socio-Technical Design

## Electives

- Recommendation is additional course from the course packages.
- Project work (e.g. in collaboration with a company) is also a possibility.
- Supportive courses for IT Product Development, e.g. from Computer Science or other departments
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# COURSES PACKAGES



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# HUMAN-CENTERED COMPUTING

Fall	Spring
<u>Interactivity and Computer Mediation – Concepts, Theories, Methods, Cases (10 ECTS)</u>	<u>Human-centered AI ( 10 ECTS)</u>
<u>Engineering Interactive Technologies (10 ECTS)</u>	

## Collaboration and Computer-Human Interaction

- Clemens Nylandsted Klokmoose
- Eve Hoggan
- Michael Wessely
- Olav Bertelsen
- Susanne Bødker



## Ubiquitous Computing and Interaction

- Hans-Jörg Schultz
- Niklas Elmqvist
- Kaj Grønbaek
- Ken Pfeuffer
- Marianne Graves Petersen



# SOCIO-TECHNICAL DESIGN

Fall	Spring
<a href="#">Sustainable Interaction Design (10 ECTS)</a>	<a href="#">Project work (5/10 ECTS) *</a>
<a href="#">Multimodal Interaction (10 ECTS)</a>	
<a href="#">Designing Wearables (10 ECTS)</a> offered in 2026	

- (\*) To do a project work, you must reach an agreement with an advisor about the contents

## Socio-Technical Design

- Majken Kirkegård Rasmussen
- Minna Pakanen
- Peter Gall Krogh



# UBIQUITOUS COMPUTING AND INTERACTION

Fall	Spring
<u>Data Visualization (10 ECTS)</u>	<u>Augmented Reality (5 ECTS)</u>
<u>Deep Learning for Visual Recognition (10 ECTS)</u>	<u>Advanced Augmented Reality Project (5 ECTS)</u>
<u>Visual Computing: Interactive Computer Graphics and Vision (10 ECTS)</u>	
<u>3D User Interface (10 ECTS)</u>	

## Collaboration and Computer-Human Interaction

- Clemens Nylandsted Klokmosé
- Eve Hoggan
- Michael Wessely
- Olav Bertelsen
- Susanne Bødker



## Ubiquitous Computing and Interaction

- Hans-Jörg Schultz
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# COURSE PACKAGES: PREREQUISITES

If you don't have the prerequisite courses or similar background in your bachelor, you can take a bachelor course as part of your MSc program.

Course package	Prerequisite (bachelor course)	Recommended/ required
Human-centered computing	<a href="#">Human-Computer Interaction</a>	required
Socio-Technical Design	<a href="#">Physical Computing</a>	required

# MASTER IN IT PRODUCT DEVELOPMENT

## ELECTIVE COURSES



# ELECTIVE COURSES

## DEPARTMENT OF COMPUTER SCIENCE

Fall	Spring
<a href="#">Machine Learning (10 ECTS)</a>	<a href="#">Systems Security (10 ECTS)</a>
<a href="#">Cryptography (10 ECTS)</a>	<a href="#">Cryptologic Protocol Theory (10 ECTS) *</a>
<a href="#">Cryptographic Computing (10 ECTS) *</a>	
<a href="#">Natural Language Processing (NLP) (10 ECTS)</a>	

- (\*) Cryptology is prerequisite for Cryptologic Protocol Theory and Cryptographic Computing

### Project work and Summer University

- [Summer University courses](#)
- [Project Work in IT Product Development \(5 or 10 ECTS\)](#)
- [Vocational Training Project at the Department of Computer Science \(10 ECTS\)](#)



# ELECTIVE COURSES

## DEPARTMENT OF MATHEMATICS

Fall	Spring
<a href="#"><u>Indledende Algebra 1 (5 ECTS) *</u></a>	<a href="#"><u>Numerical Linear Algebra (10 ECTS)</u></a>
<a href="#"><u>Indledende Algebra 2 (5 ECTS) *</u></a>	
<a href="#"><u>Introduction to Probability Theory and Statistics (10 ECTS)</u></a>	

- (\*) Only offered in Danish

# ELECTIVE COURSES

## DIGITAL DESIGN AND INFORMATION STUDIES

Fall	Spring
<a href="#"><u>Data and Digital Culture (10 ECTS)</u></a> *	<a href="#"><u>Lyd og Interaktion (10 ECTS)</u></a> *

- (\*) Only offered in Danish

# ELECTIVE COURSES

## DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING

Fall	Spring
<a href="#">Embedded Real Time Systems (10 ECTS)</a>	<a href="#">Modelling and Verification (10 ECTS)</a>
<a href="#">Modelling of Critical Systems (5 ECTS)</a>	<a href="#">Internet of Things Technology (10 ECTS)</a>
<a href="#">Wireless Sensor Networks (5 ECTS)</a>	<a href="#">Explainable Statistical Learning (5 ECTS)</a>
<a href="#">Digital Circuits (5 ECTS)</a>	
<a href="#">Computer Games Technologies (5 ECTS)</a>	

Worried about prerequisites for engineering courses?

Check course catalogue

Contact course responsible, or

Contact program responsible Qi Zhang [qz@ece.au.dk](mailto:qz@ece.au.dk)



# STUDY ABROAD



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# WHY STUDY ABROAD?

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Do you dream of working outside Denmark's borders? Have you always been fascinated by other cultures? Is there a university in the world with a completely unique knowledge in the exact subject you are interested in? Or have you also noted that it adds positively to the resume if one has spent a semester abroad?

No matter what motivates you, there are plenty of good reasons to travel the world during your studies:

- **Broaden your academic horizon**
- **Get unforgettable experiences**
- **Gain international understanding**
- **Develop occupational competencies**
- **Build an international network**

# WHEN AND HOW TO GET STARTED

- You can easily go abroad during the **5th** semester of your BSs degree or the **3rd** semester of your MSc degree.
- You can find information on how to go abroad on your [Study Portal](#)
  - Here you can read about where to go, how to apply and much more.
- Search for exchange opportunities in [MoveOn](#)
  - You can search with your degree programme and find out which universities are available for you.



AARHUS UNIVERSITY

## Exchange Opportunities for AU Students

In the database, you can search for exchange opportunities in the autumn semester of 2023 and the spring semester of 2024. The database will be fully updated 1 November 2022 when the application round for the academic year 2023-24 opens.

Text Search

Your degree programme at AU

Level at partner institution

Country

Partner Institution

Search

Home Maps & Directions Search Emergency Info

Terms Of Use Privacy Copyright Trademarks Non-discrimination Accessibility

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Powered by MoveON

# DEADLINES AND CONTACT

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Apply through [MoveOn](#):

- Deadline **1 May 2025** for going abroad in spring semester 2026.
- Deadline **1 December 2025** for going abroad in autumn semester 2026 or spring semester 2027

Questions about going abroad?

Contact our international coordinator [Ann-Kirstine Faurholdt Kristiansen](#) or [book a meeting](#)



# EXTERNAL COLLABORATION AND STUDENT ENTREPRENEURSHIP





# EXTERNAL COLLABORATION

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## Types of collaboration

- Vocational Training Project
- Bachelor's project
- Master's Thesis
- In connection with a specific course

## Further information

<https://studerende.au.dk/en/studies/subject-portals/computer-science/project-collaboration>

## General information regarding collaboration and external partners

- Find a company and a main supervisor from AU who will be part of the project
- Check whether you need additional contracts (Fast Track), NDA's or copyright
- Create a contract for Vocational Training Project via [project generator](#)

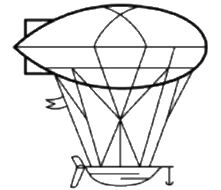
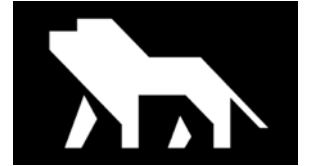
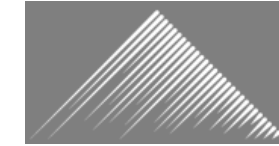
# Student Entrepreneurship at CS

## HatchIT Lab

- Local student entrepreneurship hub at CS
- Office Space and access to facilities at CS Dept.
- Networking with other CS student startups

## The Kitchen

- Central AU Entrepreneurship hub
- Funding support
- Business developers and advisors/mentors
- Workshops and events for entrepreneurs



ZEPPELINSTUDIO



For more information contact Søren Poulsen <https://www.au.dk/poulsen@cs.au.dk/>



# STUDENT JOBS

[www.cs.au.dk/jobwall](http://www.cs.au.dk/jobwall)  
[www.cs.au.dk/businessclub](http://www.cs.au.dk/businessclub)

 **STIBO SYSTEMS**  
MASTER DATA MANAGEMENT

**.nitor**

 **BETTER  
COLLECTIVE**

**Vestas**

**TRIFORK.**

  
**GRUNDFOS**

 **BEUMERGROUP**

  
**eficode**

 **LUXION**  
Advanced Lighting Technology

**bankdata**

**SYSTEMATIC**

 **InCommodities**

**RAMBOLL**

  
**Arla**

  
**TRELLEBORG**

  
**QIAGEN**

**DIS**

 **CRYPTOMATHIC**

  
**Danish Crown**

 **danske  
commodities**

  
**LEGO**

**MFT**

**TERMA<sup>®</sup>**

**INCUBA**

 **hummel**

 **EPICO**

**netcompany**

**OK**

**BESTSELLER<sup>®</sup>**

 **ALEXANDRA  
INSTITUTE**

 **twoday IT Minds**

**INCUBA**

  
**TECITY  
AARHUS**

**Destination  
AARhus**

**DigitalLead.**

**Copenhagen  
Fintech**

# PRACTICAL INFORMATION



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# CONTRACTS

## Study Contract

- Complete the contract before signing up for the first course(s)
  - 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 receive an email invitation
  - You will have a friendly chat with Andreas, Louise or Søren

## Project Work Contract

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

## Thesis Contract

- Fill out no later than the start of thesis work

All contracts are created through: <http://kontrakt.nattech.au.dk/>

### Steps:

1. Decide on course for the coming semester
2. Submit a master contract and have it approved
3. Register for course before the deadline



# SIGNING UP FOR COURSES

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## Sign up

- May 1-5 for courses in the Fall
- November 1-5 for courses in the Spring
- Advance approval of credit transfer is needed for courses from outside Nat-Tech,
  - Outside AU: see <https://studerende.au.dk/en/studies/subject-portals/computer-science/rules-and-guidelines/credit-transfer>.
  - Outside Nat-Tech, but inside AU: see <https://studerende.au.dk/en/studies/subject-portals/computer-science/rules-and-guidelines/enrolment-in-a-credit-module>.
  - Apply well in advance!
  - Advance approval of credit transfer is no guarantee that you will be admitted to the course!

For courses in the summer, see  
<https://studerende.au.dk/en/summeruniversity>

## Schedule for elective courses

- Watch out for collisions
- You may find the schedule for courses offered by the Department of Computer Science at <https://timetable.au.dk/>

# STUDENT COUNSELOR

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**Andreas Juul Jespersen**

- [www.cs.au.dk/vejleder](http://www.cs.au.dk/vejleder)
- [Studievejledning4.nat-tech@au.dk](mailto:Studievejledning4.nat-tech@au.dk)

## Possible topics

- Change of study program, delay, leave of absence, withdrawal.
- Illness.
- Study regulations
- Selecting supplementary subjects.



# ADVICE

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- If you fall behind or do not pass a course at the latest by the first reexamination, then contact the program managers or the student counselor for guidance on your individual study program as soon as possible. The earlier you reach out the better.
- You have a [max study time](#), 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.
- 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 the program managers.
- All students have at least three exam attempts for each course. Passing grades cannot be improve through additional attempts.
- Project reports must be handed in through Wiseflow before the deadline. If you do not hand in before the deadline, you will receive an administrative fail-grade and will not be able to attend the oral exam. This rule apply to both exam and re-exams.

## Program managers

Contact us at [ua@cs.au.dk](mailto:ua@cs.au.dk)

Louise Bødker Wøbbe <https://www.au.dk/lbw@cs.au.dk>

Søren Poulsen <https://www.au.dk/poulsen@cs.au.dk/>

Andreas Birch Olsen <https://www.au.dk/abolsen@cs.au.dk>







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