Doctoral studies in a nutshell

Info for new doctoral students at the School of Science
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Doctoral Programme in Science

- **Scientific part:** PHYS, MS, NBE, CS and DIEM
- **Administration:** learning services (admin) and the doctoral programme committee (academic)

- **The largest of the doctoral programmes at Aalto (tot. 6)**
  - 100 new and 80 graduate
The doctoral programme of SCI* is run by the acad. and admin. personnel

Doctoral programme committee (academic):

- Head, Prof. Tapio Lokki (CS)
- Prof. Alexander Engström (MS)
- Prof. Jukka Tulkki (NBE)
- Prof. N. Asokan (CS)
- Prof. Adam Foster (PHYS)
- Prof. Riitta Smeds (DIEM)

... and the learning services personnel (administrative):

- Emma Holmlund
  - Pre-examination process
- Mari Dagnall (CS and NBE)
- Laura Öhrnberg (PHYS, MS, DIEM)
  - Confirmation of the study plan
  - Scholarships
  - Appointing the opponent
  - Dissertation release and public display of the dissertation
  - Graduation processes

*SCI = School of Science
Doctoral studies - Case Process

Admission to the programme

Theoretical studies done by 18 mo

Supervision

Funding possibilities
- Project funding
- Department funding
- Personal grants

Recommended
- Mobility abroad
- Networking
- Teaching

Year 1
- Manuscript ready

Year 2
- Manuscript ready

Year 3
- Manuscript ready
- Drafting dissertation
- Defense
- Graduation

Year 4
- Dissertation ready - Pre-examination
- Publishing of dissertation
- Post doctoral position in another university
- Working outside academia: industry, entrepreneurship, public sector, third sector organisations

Post doctoral position in another university

Working outside academia: industry, entrepreneurship, public sector, third sector organisations

= Administrative processes of the doctoral programme
Information about doctoral studies

- INTO web pages  https://into.aalto.fi/display/endotoralsci
- Checklist available in Into  
  (https://into.aalto.fi/display/endotoralsci/Checklist+for+doctoral+candidates)
Getting started with doctoral studies

• **Remember to:**
  • Enrol as attending or non-attending every year until you graduate

• **Get to know:**
  • Into-pages
  • Aalto IT services
  • MyCourses
  • Practices of your own department
Rights and responsibilities

https://into.aalto.fi/display/endocralsci/Supervision+of+doctoral+candidate

• Rights of a doctoral candidate:
  • receive guidance and follow the study and research plan

• Responsibilities:
  • commit to the study plan and research plan and to report on your progress as agreed on in the supervision plan.

• Duties of the supervising professor:
  • follow up on the progress of your studies
  • ensure that all requirements in the study process are fulfilled
  • familiarize you with the requirements for a doctoral dissertation
  • to assist you in career planning
If something goes wrong

• **Talk with**
  • your supervising professor/thesis advisor
  • Head of the Department
  • HR of your department
  • us in the doctoral programme
International studies/research visit

- Aalto University encourages doctoral candidates to spend at least six months abroad during their studies
Theoretical studies

- 40 credits are required
  - Consists of following studies:
    - Research field 20-35 credits
    - Scientific practices and principles 5-20 credits

[link](https://into.aalto.fi/display/endotoralsci/Theoretical+studies)
Research field studies

• **Purpose:**
  • Deeper knowledge in the research field
  • Support the research work
  • Prepare for research and other demanding work that requires expertise

• **Examples:**
  • doctoral or master level (L and E-code) courses (e.g. CS-E4000)
  • practical assignments related to the research field (e.g. teaching)
  • writing a literature review
  • examinations based on textbooks or articles
  • national or international scientific conferences, seminars or summer schools
Scientific practices and principles studies

• **Purpose:**
  • Get working life skills / transferrable skills

• **Examples:**
  • research methodology
  • research ethics and good scientific practice
  • history and philosophy of science
  • scientific writing, communication, visualization
  • scientific presentation
  • pedagogical studies

*Note: language studies cannot be included in the doctoral degree!*
Confirmation of the studies

• When all theoretical studies (40 credits) have been completed
• 40 credits may be exceed, if reasonable grounds exist
• Signature of your supervising professors is needed
• DPC confirms your studies, on application

• Note: Changes are allowed, but needs to be confirmed again.
  https://into.aalto.fi/display/endotoralsci/Confirmation+of+the+study+plan
Licentiate thesis and degree (not mandatory)

- Same theoretical studies
- Write the licentiate thesis
- Examination of the thesis
- Approval of the licentiate thesis
- The Dean awards the degree

https://into.aalto.fi/display/endooralsci/Licentiate+thesis+and+graduation
General quality requirements of dissertations at Aalto

• must follow good scientific practices and ethically sustainable principles.
• must contain new scientific findings.
• research methods and results are to be presented clearly and they need to withstand examination.
• the candidate’s own contribution to the research has to be sufficient and clearly stated.

https://into.aalto.fi/display/endocralsci/General+quality+requirements+and+forms+of+dissertations
Different forms of dissertations

1. A monograph
2. An article-based dissertation
3. Essay-based dissertation
1. A monograph

- A researcher’s personal work

- An independent book, it does not contain journal articles

- The doctoral candidate’s own contribution must be stated; did you collect all the data, all the interviews, etz.
2. An article dissertation (1/2)

- a summary part and several publications or manuscripts submitted for publication
  - The summary is an independent entity, describing
    - the research problem
    - the aims
    - the methods
    - the findings of the research
    - the significance of the study for the discipline
  - The more detailed scientific information should primarily be included in the publications
2. An article dissertation (2/2)

- The publications must be
  - journal or conference articles of high quality
  - accepted through a peer-review process, but there can be a few submitted articles
  - contain new findings

- Number of publications?
  - depends on
    - the extent,
    - scientific significance,
    - quality of the publications
    - the candidate’s independent contribution
3. Essay-based dissertation

- **Consists of a summary part and scientific essays**
  - The summary is an independent entity, describing
    - *the research problem*
    - *the aims*
    - *the methods*
    - *the findings of the research*
    - *the significance of the study for the discipline*
  - **Essays**
    - *contain new findings and viewpoints*
    - *Primarily independent research by the author*
    - *Collaboratively written essays may be included*
Pre-examination process

- Can start when the dissertation manuscript is complete and ready for publication
  - *Do not develop the dissertation together with the examiners!*
- Starts on application
  - The supervising professor proposes two independent pre-examiners
- Takes 2-3 months, even more
Publishing the dissertation

- They are published in the Aalto publication series
- Time needed for the publishing process: 5 weeks
- Public display in the School of Science
  - Min. 10 days prior to the defense, printed version
  - Don’t forget the electronic publishing
  https://into.aalto.fi/display/endotoralsci/Publishing+and+printing+of+a+dissertation
Public defence

1-2 opponent(s), supervising professor proposes

Lectio Praecursoria
- Given in the candidate’s own language (Fin, Swe, Eng)

Tip: Go to public defences before your own, so you know what it is going to be like!
Approval of the dissertation and graduation

(https://into.aalto.fi/display/endotheralsci/Approval+of+a+dissertation+and+graduation)

- DPC approves and grades the dissertation
  - The opponent proposes a grade for the dissertation
    - Pass or Pass with distinction (proposal: only fail/pass from 1.8.2018 onwards)
- The Dean awards the degree
Valid until 31.12.2021:

• 500 euro for the first peer-reviewed article included in the doctoral dissertation

• 500 euro for completing the theoretical studies (40 ECTS) within one year and six months of the date of admission to the doctoral programme

• 2,000 euro scholarship for completing the doctoral degree,
  • provided the degree was earned within eight full semesters from study right to pre-examiners appointed, or
  • provided the degree was earned by the end of the calendar year the doctoral candidate turns 30 years.

• The application has to be submitted within six months of the fulfillment of the scholarship criteria.
Courses for doctoral candidates

- **Can be found at:**
  - Course webpage by SCI: [https://into.aalto.fi/display/endotoralsci/Courses+and+lectures+for+doctoral+candidates](https://into.aalto.fi/display/endotoralsci/Courses+and+lectures+for+doctoral+candidates)
  - Courses offered by other schools: [https://into.aalto.fi/display/endotoralcourses/Homepage](https://into.aalto.fi/display/endotoralcourses/Homepage)
  - MyCourses [http://mycourses.aalto.fi/](http://mycourses.aalto.fi/) Note! Only E or L –level courses
  - the department web pages
  - the study guides: [https://into.aalto.fi/display/enmastersci/Study+guides](https://into.aalto.fi/display/enmastersci/Study+guides)
  - the course catalogue: [https://courses.aalto.fi/](https://courses.aalto.fi/)
  - the Language Centre: [https://into.aalto.fi/display/enlc/Courses+for+doctoral+students](https://into.aalto.fi/display/enlc/Courses+for+doctoral+students)
Help with writing and publishing at Aalto

• **Individual writing tutoring, the Writing clinic:**
  https://into.aalto.fi/display/filc/Writing+Clinic

• **Choose a journal to submit to:**
  http://libguides.aalto.fi/content.php?pid=621981&sid=5480136

• **Open access principles at Aalto:**
  http://libguides.aalto.fi/content.php?pid=621981&sid=5317221
  • Why – you get a lot more citations
ACRIS – the research portal of Aalto
-> creates a publication list for you

• ACRIS (Aalto Current Research Information System)
  • will automatically import your publications from the Web of
  Science and Scopus databases
• If you are not an Aalto employee, you have to give
  permission in OODI, so that a profile can be made for you.
• More information: acris@aalto.fi
Questionnaires and follow ups

• For new students
• For 1-4 year students (?)
• Midterm review (at PHYS, MS and DIEM)
• Clarification for full time students of the situation if not graduated within 5 years.
• Questionnaire to graduated students
Finding a job after getting your degree

• Start planning your future career quite soon! What do you want to do?
• Finding a job might take a long time
• Getting a doctoral degree doesn’t guarantee you a job.
• Participate in a CV clinic, Career Coaching or in a mentoring programme
• Check our website: https://into.aalto.fi/display/endoc1/Doctoral+Career+after+Graduation
WORKING AREAS OF GRADUATED DOCTORS
87 DOCTORS GRADUATED IN 2015
N=81

- University or research institute abroad: 20%
- Aalto University: 14%
- Other university or research institute in Finland: 16%
- Company in Finland: 33%
- Company abroad: 2%
- Parental leave (not employed): 2%
- Unemployed: 4%
- Entrepreneur or freelancer: 3%
- Public sector in Finland: 6%
Tips for your doctoral studies

• Be goal-oriented and committed
  • Learn to prioritize and use your time
• Take responsibility
  • You are responsible for your doctoral studies!
• Ask for help and guidance when you need it
• Network, within Aalto and outside Aalto
• Learn communication skills
  • Learn to defend your results, present them and publish them
• Go abroad for some time
Thank you for your attention!

The doctoral programme wishes you success in your studies and hope that you will enjoy your time here at Aalto!

These slides will be available here:
https://into.aalto.fi/display/events/Welcome+event+for+new+doctoral+students+at+SCI