Study plan

Please note: If you are unable to scan the documents which require signatures, please send them to us as pdf-files from your aalto.fi e-mail. Please add your supervising professor (aalto.fi e-mail) to the message and ask him/her to confirm the information in the pdf-file.

Shortcuts

What kind of courses can be included in the doctoral degree?

- Midterm Review in Applied Physics
- Mandatory research field courses in Industrial Engineering and Management
- Mandatory methodology courses in Industrial Engineering and Management

Registering individual study attainments

Studies at other universities

- Doctoral students in the Department of Computer Science - cooperation with University of Helsinki

Confirmation of study plan

500 euro scholarship for completing theoretical studies

The new student information system, Sisu, will replace Aalto University’s current student information system Oodi. From now on also doctoral students have to do their study plan in Sisu. Everyone graduating in June 2021 or later needs to do a Sisu study plan, even if the studies have already been confirmed and completed.

You should make a study plan in Sisu during spring 2021, if:

- You are graduating in June 2021 or soon after that. The degree certificate is formed on the basis of your study plan in Sisu, so it is not possible to apply for graduation without this.
- You are planning to take courses in autumn term 2021. Registration for courses and exams will be done in Sisu after 9.8.2021, and it is not possible to enrol for the courses if they are not included in your study plan in Sisu.

Instructions:

- Sisu instructions for students (e.g. recordings on Sisu webinars)
- How to make a study plan in Sisu? (Instructions for doctoral students)
  - Please remember to choose the correct curriculum period on the basis of your study plan. E.g., if your right to pursue the doctoral degree has started in January 2018, choose 2017-2018 as your curriculum period. This is important, because research fields of the doctoral programme have varied in different curriculum periods and your research field may not be available in most current curriculum periods.
  - Choosing the correct curriculum period is essential especially for doctoral students in the Department of Industrial Engineering and Management, because the number of compulsory courses depends on the starting date of the right to pursue doctoral degree.

Please note that Oodi and Sisu are not in use during 31 July – 8 August 2021!

What is a study plan?

The study plan is an official document in which the theoretical studies included in the degree are confirmed in detail: course code, name and credits. The courses are also grouped in modules by the degree programme. The study modules are research field studies and scientific principles and practices.

Why to do and have it?

Study plan is an important part of the planning of your studies. It is important to discuss the courses included in the degree with the supervising professor and he/she will be required to support the study plan in order for it to be confirmed. The confirmed study plan ensures that there are no surprises with the studies required and you can graduate as planned.

If the plan should change, a study plan can be updated and confirmed again. The study plan is confirmed by the Chair of the committee.

Please note: if you wish to take courses from other universities (flexible study right) or you wish to transfer courses from other universities, the study plan needs to be updated and confirmed again.

How to choose courses and what can be included in the degree?
It is worth discussing the theoretical studies with the professor when the dissertation research is planned. Some research fields have compulsory courses which you can find below.

Studies in the field of research should support dissertation work and you can choose courses from your own school, other Aalto schools or other Finnish universities.

**Studies at other universities**

**Applying a flexible study right**

If Aalto does not have the necessary courses or teaching, the doctoral student can, within the framework of flexible study right, conduct individual courses at other Finnish universities as well. In these cases, the studies must be validated in an officially confirmed study plan before applying for a flexible study right.

1. Update your study plan, check the deadlines for applications
2. After your updated study plan has been approved, you can apply for a flexible study right
3. (After you have completed the course, check the guidelines below starting from item 2)

**Transferring the courses from other universities**

If you have already completed courses suitable for the doctoral degree (in Finland or abroad), the credits need to be first confirmed in the study plan and then transferred to Aalto University. For this, you need to apply for a credit transfer:

1. Update your study plan if necessary, check the deadlines for applications. In order to transfer the credits to Aalto, the courses transferred need to be included in the study plan confirmed by the Doctoral Programme Committee
2. Fill in the application for credit transfer
3. Submit the forms and an official transcript of records including the courses to be transferred to the Student Services of the Doctoral Programme by email

**Doctoral students in the Department of Computer Science - cooperation with University of Helsinki**

Department of Computer Science has established a study cooperation agreement with Master’s programmes in Data Science and Computer Science of University of Helsinki as of 1 January 2021. The agreement applies only to doctoral students in the Department of Computer Science and gives you a possibility to take courses without applying the flexible study right.

**How to apply and more information about the courses**

- Please note that courses with the level of *intermediary studies* from University of Helsinki cannot be included in your doctoral degree in Aalto.
- If the course you wish to take in University of Helsinki is not in your study plan in Aalto, please discuss first with your supervising professor. Either the study plan including the course or a separate approval by your supervising professor should be included in the application.

**Questions?**

- Questions about the study plan please contact Doctoral Programme in Science at doctoral-sci-elec@aalto.fi.
- Questions about the application process please contact sari.salmisuo@aalto.fi.

**What kind of courses can be included in the doctoral degree?**

The doctoral degree may contain a substantially wider variety of forms of theoretical studies than is possible in the Master’s degree. In addition to conventional courses, also individual study attainments can be included in the degree. Courses acceptable for doctoral degree are advanced and doctoral studies. Language courses are not accepted in the doctoral degree. The extent of theoretical studies is 40 ECTS, and 1 ECTS is equivalent to 27 hours of work.

*Individual study attainments, which are to be agreed on with the supervising professor.*

<table>
<thead>
<tr>
<th>Research field</th>
<th>Recommended courses or credits</th>
<th>Restrictions</th>
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<tbody>
<tr>
<td>(20 - 35 ECTS)</td>
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Courses acceptable for doctoral degree are courses, which type is Advanced Studies or Doctoral Studies. Letters E and L denote these courses in the course codes, e.g. PHYS-E1234 or PHYS-L1234.

Courses offered

Courses not acceptable for doctoral degree are courses, which type is Basic Studies or Intermediate Studies. Letters A and C denote these courses in the course codes, e.g. PHYS-C1234 or PHYS-A1234.

*Scientific summer/winter schools
2-3 ECTS per week N/A

*Journal articles and conference papers, which will not be included in the thesis
2 ECTS per article 2 ECTS per article, max. 3 articles = 6 ECTS (DPC 12.12.2017)
Starting from 1 January 2018 it is not possible to include study attainments from participation in conferences in the research field; they have to be included in the scientific practices and principles

*Self-study (book or other literature exams, writing a literature review, reports or other assignments)
1-10 ECTS, the supervising professor shall determine the amount of credits N/A

*Refereeing scientific papers
1 ECTS = 3 papers N/A

Department of Applied Physics

Full-time doctoral students in the research field of engineering physics must complete the following course:

- PHYS-L0666 Midterm review 10 ECTS

The course is mandatory for full-time doctoral students who have started their doctoral studies after 1.1.2013. The course can be included either in the Research field -module or in the Scientific practices and principles -module.

Department of Industrial Engineering and Management

Two of the following courses are compulsory:

- TU-L0010 Advanced Organizational Theory
  (Corresponding courses: 21L11109; TU-22.1196)
- TU-L1003 Doctoral Course in Strategy, Venturing, and Organizations
  (Corresponding courses: TU-L1002; TU-L1000; TU-L3000; TU-91.900; TU-91.3007; TU-L1001)
- TU-L2001 Doctoral Course in Operations Management
  (Corresponding courses: TU-L2000; TU-22.1193, TU-22.1199)

One of the following seminars is compulsory:

- TU-L2000 Doctoral Seminar in Industrial Management
  (Corresponding courses: TU-L2001; TU-22.1193; TU-22.1199)
- SCI022Z-LZ - Doctoral Seminar in Organizational Development, Leadership, Entrepreneurship and Knowledge Management
  (Corresponding courses: TU-L3000, TU-53.1710; TU-L1003)
- TU-L1000 Doctoral Seminar in Strategy
  (Corresponding courses: TU-91.900; TU-91.3007; TU-L1003; TU-L1002; TU-L1001)

Scientific practices and principles

(5 - 20 ECTS)

Recommendations for courses or credits

Restrictions

Postgraduate-level and advanced-level courses in:
- research methodology
- research ethics
- good scientific practice
- history and philosophy of science

(enumerated as PHYS-E1234 or as PHYS-L1234)

Research Ethics 2 ECTS

One C-coded course (denoted as PHYS-C1234) of max. 5 ECTS can be included in the scientific practices and principles -studies.

Please note: courses denoted by A-code (PHYS-A1234) cannot be included in the doctoral degree.
Transferable skills and competences in:

- scientific writing and communication
- pedagogical training

Aalto University Communication courses

Pedagogical training in Aalto (requires Aalto login)

Self-study courses on transferable skills

<table>
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<tr>
<th>Presentation of research work at scientific conferences (poster, presentation)</th>
<th>1-2 ECTS</th>
<th>2 ECTS per conference, max. 3 conferences = 6 ECTS (starting from 1 January 2018). Module cannot consist solely of conference presentations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching (lectures, exercises), planning and implementing a new course</td>
<td>Max. 6 ECTS (starting from 1 January 2018)</td>
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<tr>
<td>Co-supervision/guidance of B.Sc. theses, special assignments, or M.Sc. theses</td>
<td>2 ECTS per thesis/assignment</td>
<td>2 ECTS per thesis/assignment, max. 3 theses/assignments = 6 ECTS (starting from 1 January 2018)</td>
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Department of Industrial Engineering and Management

The following three methodology courses are compulsory (amount of credits can vary):

- TU-L0000 Research Methods in Industrial Engineering and Management
- TU-L0031 Qualitative Research Methods
  - (Corresponding course: TU-L0030)
- TU-L0022 Statistical Research Methods
- TU-L0000 Research Methods in Industrial Engineering and Management

Individual study attainments in the doctoral degree

You can have individual study attainments in the doctoral degree. You may participate in summer/winter schools, complete individual assignments, or do a book exam, for example. These individual study attainments are registered by using the general code for the doctoral studies of the research field (please see the codes below).

The supervising professor decides the amount of credits (with certain restrictions, as described above) to be given as he/she should have the best information on the amount and level of difficulty of the work the doctoral student has done. 1 ECTS is equivalent to 27 hours of work. Please note that any work cannot be compensated multiple times: if e.g. a conference paper will be included in the dissertation or licentiate thesis, it is not possible to get credits from it.

Note that you should NOT combine study attainments; each attainment should be registered individually. For example, if you have written three articles, and your supervising professor will give two ECTS for each, you/your supervising professor need to fill in three separate study attainments for each of the article! No half credits are registered, only whole numbers of credits so only if the attainment is worth 0.5 ECTS, it is acceptable to combine attainments, so that the ECTS amount is a whole number.

The supervising professor fills in a study attainment certificate for each attainment, and sends it as an email attachment to doctoral-sci-elec@aalto.fi. Additional information should always be included in the attainment, such as topic and date for summer school, name of the conference, name of the book, topic of an assignment. Also language of the attainment must be included in the study attainment certificate. Information on language of study attainment is available at Language of study attainments.

These codes are used to register individual study attainments such as summer/winter schools, conference presentations, book exams, individual assignments. Specific information about the course should always be added to the study attainment.

Department of Applied Physics:

- SCI019Z-LZ Postgraduate studies for Applied Physics

Department of Computer Science:

- SCI020Z-LZ Postgraduate studies for Computer Science

Department of Industrial Engineering and Management:

- SCI0222Z-LZ Postgraduate studies for Industrial Engineering and Management

Department of Neuroscience and Biomedical Engineering:

- SCI0232Z-LZ Postgraduate studies for Neuroscience and Biomedical Engineering
Department of Mathematics and Systems Analysis:

As of 1 August 2020:

- SCI006Z-LZ Postgraduate studies for Mathematics and Statistics
- F017Z-LZ Postgraduate studies for Systems and Operations Research

Study plan confirmation process

- Familiarize yourself with the degree structure and the requirements regarding the courses
- Discuss the studies and requirements with your supervising professor
- Make yourself a study plan in Sisu
  - How to make a study plan in Sisu? (instructions for doctoral students)
  - Please see the deadlines here
- If additional information is required, you will be contacted by the Doctoral Programme
- You will be informed when the study plan has been approved

500 euro scholarship for completing theoretical studies

If you have completed your studies (40 ECTS) within one year and six months of the date of admission to pursue doctoral studies, you can apply for a scholarship of 500 euros for completing theoretical studies. Scholarship can be awarded after your studies 40 ECTS have been confirmed. The application has to be submitted within six months of the fulfillment of the scholarship criteria.

Link to the online application form as well as application instructions is available at Incentive scholarships.