

How to apply

Suomeksi

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Current

Application deadline for part-time doctoral studies in Doctoral Programme in Science: 1.-30.9.2019

Eligibility of applicants

As a rule, the postgraduate degree completed in the School of Science is the Doctor of Science (Technology) degree, but the Licentiate of Science (Technology) degree is also possible.

Eligible applicants for studies leading to an academic doctoral degree (as defined in the University Act) have completed:

- a relevant Master's degree awarded by a university;
- a relevant Master's degree awarded by a university of applied sciences; or
- an applicable education completed abroad which in the awarding country gives eligibility for corresponding higher education

In principle, an acceptable master's degree has been carried out in accordance with the principles of the Bologna Process (3+2 years). A degree earned abroad at a time before the Bologna Process or in a country, which does not follow the Bologna Process, must include a minimum of 4 years of studies. The eligibility of the applicant is shown by a degree or an education, which as a rule contains studies and a master's thesis and which are deemed by the School as providing the applicant with an adequate knowledge base for doctoral studies in the School of Science. If the degree or education differs from the description above, but makes the applicant eligible for doctoral studies in the country that awarded the degree or gave the education, the applicant must provide a document confirming his/her eligibility for doctoral studies in the country where the degree/education was given.

The potential of applicants with an applicable Finnish polytechnic master's degree for successful doctoral studies is assessed by the School case by case. Granting the right to study requires the School to determine the applicant's need for supplementary studies. If the School deems the applicant with a polytechnic master's degree in an applicable technical field as having potential for completing the doctoral degree, the applicant will be assigned a sufficient amount of supplementary studies to allow him or her to start the doctoral studies. The extent of supplementary studies may not, however, exceed 60 ECTS. If the extent of necessary supplementary studies exceeds this maximum, the applicant will be advised to first pursue the master's degree before applying for a right to pursue doctoral studies. When assessing the applicants' potential for doctoral studies, the School shall acknowledge that the extent of the polytechnic master's degree in the field of technology is 60 ECTS, which corresponds to studies of one year's duration, whereas the extent of a university master's degree is 120 ECTS, which corresponds to studies of two years' duration. The extent of polytechnic master's degrees in fields other than technology is 60 ECTS or 90 ECTS.

International applicants with a previous technical degree corresponding to a Finnish polytechnic degree are subject to the same rules as those with a Finnish polytechnic degree.

Admission criteria

The professor (i.e. supervising professor) who is responsible for the research field to which the applicant is applying to, is responsible for the academic evaluation of the applicant. [The Doctoral Programme Committee](#) will also evaluate the applicant. When needed, the doctoral programme will ask the department to evaluate the applicant. The department will define whether an evaluation statement from the department is needed regarding all applicants to that department or only when the doctoral programme considers it relevant.

To be selected for doctoral studies, the following is required for an applicant:

- Adequate knowledge in the research field applied for, gained through, for example, courses in the major or courses in the advanced module within the Master's studies.

- When necessary, the School will set prerequisites for admission into the doctoral programme that may be gained, for instance, by taking master-level courses.
- Sufficient basic knowledge that supports the dissertation work and the writing of the dissertation.
- An excellent command of Finnish, Swedish or English.

Grades:

(on the scale of 1 to 5)

- Completed the master's thesis with the minimum grade of 4/5.
- Completed the master's degree (excluding the master's thesis, i.e. the weighted average of the courses) that is the basis for the doctoral studies with an average grade of 3.5/5 or higher.
- Completed the major of the degree that is the basis for the doctoral studies with an average grade of 3.0/5 or higher, if the master's degree was earned in accordance with the degree regulations of 1995 or at an earlier time (when the bachelor's and master's degrees were not separated).

The same criteria are applied to applicants with a foreign degree or degree from another Finnish university.

Other selection criteria (academic evaluation):

- contents of the previous degree(s)
- previous study achievements
- the quality and international regard of the applicant's degree and university
- research potential, previous research experience: work experience in the research sector, conference papers, articles etc.
- appropriateness of the research topic: research orientation on Department's focus areas so that proficient guidance and the supervising professor's genuine scientific interest is met
- research plan: theoretical and practical relevance and novelty of the topic, and feasibility of the plan (quality, realism, methodology etc.)
- effort and resources for doctoral studies: feasibility of the study plan, realistic time available for studying and research during the forthcoming 4 years
- university's resources for guidance in the research area
- other reasons presented by the applicant

If these conditions are not met, but the applicant is otherwise suitable for doctoral studies, the applicant may raise his/her grades or the school set prerequisites for entry. The School of Science may accept equivalent attainments completed in other schools as prerequisites on the grounds of the supervising professor's written statement.

The above mentioned selection criteria may be departed from on the grounds of the supervising professor's written statement.

Application instructions

Please note: From 1 August 2016 onwards the accepted applicants may accept **only one study place leading to a higher education degree in Finland** during one academic term (Universities Act 558/2009). Higher education degrees include bachelor's, master's, licentiate and doctoral degrees awarded by universities as well as polytechnic degrees.

The academic terms run from 1 August to 31 December and 1 January to 31 July. The acceptance of a study place is binding and cannot be canceled. Even if the accepted applicant postpones the commencement of studies or gives up her/his right to study, s/he cannot accept another study place leading to a higher education degree-starting the same academic term.

Application periods

Full-time study rights can be applied for once a month (except not in July).

Please note that a part-time study right can be applied for only in **March** and in **September**. Decisions on applications submitted in March will be made in May and decisions on applications submitted in September will be made in November.

[Deadlines for applications](#)

Before submitting the application

Before submitting the application, each applicant must contact a supervising professor who is responsible in their intended research field to doctoral studies and the supervision of the studies. Applicants are urged to ensure that their expertise and research interests are commensurate with the research group (and those of the supervising professor of their studies) that they apply to.

The most talented doctoral candidates may receive funding from their department or they may fund their studies through projects or grants. The funding should be primarily discussed with the supervising professor. More information on [financing your studies](#).

In order to prepare for the discussion with the professor, it is beneficiary to prepare a CV (along with a list of possible publications) and a preliminary research plan. At this point the applicant's eligibility and prerequisites for doctoral studies will be checked by the professor. Also the possible prerequisites for entry will be discussed.

In addition to the research plan, a study plan, a funding plan and a supervision plan will be discussed with the professor. See more about these documents below. When the applicant signs the application he/she commits to study according to it and when the supervising professor signs the application he/she commits to be the supervising professor of the doctoral candidate. More information about [the rights and responsibilities of the doctoral candidate and the supervising professor](#).

Research fields and professors

Code	Name of the research field in three languages	Supervising professors (in alphabetical order)	Research groups of the field
SCI02 3Z	Neurotiede ja lääketieteellinen tekniikka Neurovetenskap och biomedicinsk teknik Neuroscience and biomedical engineering	Ala-Laurila, Petri Ilmoniemi, Risto Jääskeläinen, Iiro Koskelainen, Ari Kuzyk, Anton Nieminen, Heikki J. Palva, Matias Parkkonen, Lauri Salmelin, Riitta Sams, Mikko	Research groups: http://nbe.aalto.fi/en/groups/
F006Z	Matematiikka Mathematics Matematik	Brzuska, Chris Engström, Alexander Hannukainen, Antti Hollanti, Camilla Hyvönen, Nuutti Ilmonen, Pauliina Kinnunen, Juha Korte, Riikka Kubjas, Kaie Kytölä, Kalle Leskelä, Lasse Michaek, Mateusz Noferini, Vanni	Research groups: https://math.aalto.fi/en/research/
F017Z	Systeemi- ja operaatiotutkimus Systems and Operations Research System- och operationsanalys	Ehtamo, Harri Oliveira, Fabricio Salo, Ahti	Systems Analysis Laboratory: http://sal.aalto.fi/en/
F008Z	Mekaniikka Theoretical and Applied Mechanics Mekanik	Stenberg, Rolf	Mechanics: https://math.aalto.fi/en/research/applied/mechanics/
SCI01 9Z	Teknillinen fysiikka Engineering Physics Teknisk fysik	Alava, Mikko Ala-Nissilä, Tapio van Dijken, Sebastiaan Flindt, Christian Foster, Adam Groth, Mathias Hakonen, Pertti Ikkala, Olli Kaivola, Matti Kauppinen, Esko Lado, Jose Liljeroth, Peter Lund, Peter Pekola, Jukka Puska, Martti Ras, Robin Rinke, Patrick Ruokolainen, Janne Sillanpää, Mika Timonen, Jaakko Tuomisto, Filip Törmä, Päivi	Research groups: http://physics.aalto.fi/en/groups/

SCI02 0Z	Tietotekniikka Computer Science Datateknik	Aura, Tuomas Babbar, Rohit Brzuska, Chris Chalermsook, Parinya Di Francesco, Mario Gionis, Aristides Hyvönen, Eero Hämäläinen, Perttu Jung, Alexander Kannala, Juho Kaski, Petteri Kaski, Samuel Kivelä, Mikko Lampinen, Jouko Lassenius, Casper Lehtinen, Jaakko Lokki, Tapio Lähdesmäki, Harri Malmi, Lauri Mannila, Heikki Marttinen, Pekka Mekler, Elisa Mäntylä, Martti Niemelä, Ilkka Nieminen, Marko Orponen, Pekka Rintanen, Jussi Rousu, Juho Saramäki, Jari Savioja, Lauri Solín, Arno Suomela, Jukka Takala, Tapio Truong, Hong-Linh Uitto, Jara Vehtari, Aki Vuorimaa, Petri Ylä-Jääski, Antti	Research groups: https://www.aalto.fi/department-of-computer-science/research-groups
SCI02 2Z	Tuotantotalous Industrial Engineering and Management Produktionsekonomi	Artto, Karlos Biniari, Marina Gustafsson, Robin Holmström, Jan Järvenpää, Eila Jääskeläinen, Mikko Kauranen, Ilkka Lillrank, Paul Luoma, Jukka Maula, Markku Rajala, Risto Saarinen, Esa Saarinen, Lauri Schildt, Henri Schmidt, Jens Smeds, Riitta Tanskanen, Kari Vuori, Natalia Vuori, Timo	https://www.aalto.fi/department-of-industrial-engineering-and-management/research-groups

Application form and its appendices

Only complete applications will be processed. Supplementing the application may have an effect on its processing date.

Required from each applicant:

- [Electronic application form](#)
Please read the instructions below carefully before filling in the online application form. After reading the instructions and having all the documents ready, register to the online application system, fill in the application, attach all the required documents and send it.

The following appendices are required to be attached with the application (in pdf, downloaded to the electronic application form):

- [Curriculum vitae \(CV\) example](#)
 - including a list of publications and an account of other scientific activity; Remember to update you CV so that the information there does not conflict with your funding source!
- [Preliminary study plan](#)
 - 40 credits [theoretical studies](#)
- [Supervision plan](#)
- [Research plan](#). Applicant can also make a free-form research plan; note that it has to be signed by the applicant and the supervising professor!
Research plan includes:
 - preliminary research plan

- schedule for the research
- possibilities for funding the research work (full-time applicants must have acquired funding for at least 6 months when applying; plans to apply for funding is not sufficient for a full-time status)
- aim and impact of the research
- methods and implementation of the scientific plan
- researcher mobility during and after doctoral studies
- publication plan

In addition to the appendices above, **applicants to the research field of Industrial Engineering and Management are required to have:**

- A recommending statement from the Department of Industrial Engineering and Management. The Doctoral Programme will ask for the statement on behalf of the applicant. The statement must be a recommending one in order for the applicant to be approved to the programme.

The following documents are required in addition to the above from an applicant with a Master's degree from outside TKK or Aalto University:

- **Copies of degree diplomas**

- Including degree certificate, transcript of completed courses and in European countries also [the Diploma Supplement](#), certified by the home university or notary, together with a translation of these if the original documents are not in Finnish, Swedish or English.
- **Please note that regular copies or scanned colored versions are not sufficient.**

Degrees awarded by a higher education institution **in Finland**

The copies of study certificates must be certified either by the issuing institution or by two unbiased signatories. The copies must be made of the original, official documents. Copies of copies will not be accepted. If the certificate has several pages, each page must be certified from the right side of the page. Each page of the copy must carry the signature, name of the signatory/signatories and date. The signatories must see the original document and the copy of it side by side. By signing they certify that the copy is an unaltered copy of the original document.

Degrees awarded by a higher education institution **outside Finland**

The copies of study certificates must be certified by the issuing institution or by a notary public. The copies must be made of the original, official documents. Copies of copies will not be accepted. If the certificate has several pages, each page must be certified from the right side of the page. Each page must be certified separately and indicate clearly the date and the original signature, printed name and stamp of the certifying officer. The mere mention of the official copy (e.g. stamp "True copy") is not enough. Please also see the [country-specific requirements](#).

- **English abstract of Master's thesis**
- **Proof of proficiency in Finnish, Swedish or English**
 - Required, if the applicant is not a native speaker or was not schooled in any of these languages.
 - If the applicant is working at the department or if the applicant applies for full-time doctoral studies, the supervising professor may write a recommending statement that the applicant has sufficient language skills. If the professor writes a recommending statement, no language test is required.
 - More specific [language requirements](#).
- **Copy of the holder page of your passport**
- A document confirming eligibility for doctoral studies, if needed (please see Eligibility for doctoral studies) with an official translation, if the original document is not in Finnish, Swedish or English.

Language requirements

A successful applicant must have an excellent command of Finnish, Swedish or English. All international applicants applying for doctoral studies must demonstrate their proficiency in English. Applicants are required to attach an official language test report to their application.

Accepted tests and their minimum score requirements are:

- **IELTS** (Academic IELTS only)
 - Overall Band Score: 6.5
 - Writing Band Score: 5.5
- **TOEFL** (IBT = Internet Based Test, PBT = Paper Based Test)
 - Total score: 92 (IBT), 580 (PBT)
 - Writing score: 22 (IBT), 4.0 (PBT)
 - PDT reading section 22, listening section 22, and writing section 24
- **CAE**, i.e. Cambridge Certificate in Advanced English (CAE): A,B or C
- **CPE**, i.e. Cambridge Certificate of Proficiency in English (CPE): A,B,C or Level C1
- **Pearson Test of English** (PTE Academic only)
 - Total score: 62
 - Writing score: 54

The minimum requirements are very strict. If your score does not fulfill the minimum requirements, you are not eligible to apply and your application cannot be processed.

The language test result has to be valid during the application period, i.e. the test result has to be valid at least on the application deadline. Please note that the **TOEFL, IELTS and PTE A language test reports are valid for two years**, starting from the test date. Note also that the ETS does not send TOEFL test results after they have expired. **CAE and CPE do not have any restriction for their validity.**

IELTS- test score results can be submitted as copy of the report. The authenticity of the test result is verified by the test provider's electronic certification service.

TOEFL test results must arrive at Aalto University directly from the test organizer.

The following groups are exempted from the language test requirement:

An English language test is not required of applicants who:

- have earned a degree taught in Finnish, Swedish or English in a higher education institution in Finland.
- have earned a degree in an English-medium programme at a higher education institution in an EU/EEA country, provided that all parts of the degree were completed in English. The language of the degree must be stated unambiguously in the degree certificate or its appendix, or in the transcript of records or other official document issued by the awarding higher education institution.
- have earned an English-medium higher education degree requiring a physical on-site presence at a higher education institution in the United States, Canada, Great Britain, Ireland, Australia or New Zealand.
- are full-time applicants or applicants already working at the department, whose supervising professor writes a statement of the applicant's sufficient language skills in English.
- have studied as exchange students in the field of science and technology at Aalto University (a Aalto University transcript of records or certificate of student status is required)
- have already a study right for master/doctoral programme at Aalto University and have demonstrated the proficiency in English when applying for this programme

If the degree includes studies from some other institution, the studies must also have been taken in English in a country and institution where the completed studies exempt the student from taking an English language test. However, this does not apply to degree studies completed during a student exchange.

Only the above-mentioned groups are exempted from the language test requirement, for all other applicants the official language test result is an obligatory application document and applications without the test result will not be processed.

Full-time and part-time studies

All doctoral candidates are defined as either full-time or part-time students. Doctoral candidates may not change their study mode by themselves, but it can be changed by application if necessary.

Full-time doctoral students

Full-time doctoral students' personal study and research plans are drawn up so as to complete the doctorate within four years from granting the right to pursue doctoral studies. Full-time doctoral students must be able to spend 80 % of their working hours to doctoral studies.

Doctoral candidate applying a full-time status need to have a funding allocated to doctoral studies (e.g. project funding, personal grant or funding from employer). Typical full-time students are those who work at the department either with personal grant or receive funding from research project or those who work at a research institute or an enterprise. Those working outside Aalto University who wish to be full-time students must provide a document of the employers' approval for full-time doctoral studies (80 % of their working hours are dedicated to doctoral studies).

Part-time doctoral students

If the criteria for full-time doctoral studies are not met, the doctoral candidate's mode of study is part-time. The study plan of a part-time doctoral student is drawn up to serve doctoral studies that will last longer than four years but no more than eight years.

A part-time doctoral student typically has a main occupation outside the School of Science which does not include scientific research for doctoral dissertation.

Applicants of part-time doctoral studies should discuss:

- whether the research is closely connected with the applicant's own work
- what opportunities the employer has for supporting intensive postgraduate studying e.g. by side of work.

Language of degree of a doctoral candidate

The doctoral candidate will define in his/her application for doctoral studies in which language he/she will pursue his/her degree (language of degree). The possible languages are Finnish, Swedish (not in the School of Business) or English. If the doctoral candidate wants to write his/her doctoral dissertation (the compiling part of a compilation dissertation or a monograph) or his/her licentiate thesis in Finnish or Swedish, the language of degree of the doctoral candidate will be Finnish or Swedish. The language of degree is approved by the doctoral programme committee.

The language of degree can on reasonable grounds be changed later on, if e.g. the language of the doctoral dissertation or licentiate thesis changes. A freely formulated, signed application with reasons for why the language of degree should be changed, shall be submitted to the doctoral programme of the doctoral candidate's own school together with the degree certificate application.

This guideline will take effect starting from 1.1.2016. Doctoral candidates who have been chosen to the doctoral programme before 1.1.2016 may submit a freely formulated application to get the language of degree assigned with the same principles as new doctoral candidates.

Finnish or Swedish as a language of degree

A doctoral candidate whose language of degree is Finnish or Swedish will get the degree certificate in Finnish or Swedish along with a translation in English. If the doctoral candidate writes his/her thesis in Finnish or Swedish, the language of the degree will always be Finnish or Swedish despite the earlier choice of language.

English as a language of degree

If the doctoral dissertation or licentiate thesis is written in English, doctoral candidate can choose English as a language of degree.

If the doctoral candidate's language of degree is English, he/she will get the degree certificate in English and in Finnish or Swedish. The language of degree will be mentioned in the diploma supplement, and in the degree certificate that two degree certificates have been given.

Granting the right to pursue doctoral studies

The Doctoral Programme Committee of the School of Science will present the applicants to the Dean of the School of Science based on the recommendations of the supervising professors and when needed from the departments. The Dean approves/rejects the applicants.

The study right starts on the day when the Dean admits the applicant to the doctoral programme, but the study place is not established until the applicant has accepted the study right offered. The applicant will have 4 weeks time to accept the study place.

The School of Science confirms the research field and the professor of the research field to be the supervising professor of doctoral candidate's doctoral studies.

All applicants are informed of the decision. A successful applicant will be granted the right to pursue the degree of Doctor of Science in Technology. All doctoral candidates are defined and registered as either full-time or part-time students. Also the language of the degree is registered. All new doctoral candidates are registered as attending in the student register.