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Eligibility and selection criteria

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

To be eligible for doctoral studies at the CHEM, students must:

- hold a master's degree in technology granted by a Finnish university or,
- hold a master's degree granted by a Finnish university providing them with the knowledge base required for the postgraduate research field applied for or,
- hold a degree granted by a university abroad corresponding to the Finnish Master's degree, providing them with the knowledge base required for the postgraduate research field applied for.

The knowledge base and skills required for doctoral studies shall be demonstrated by a master's degree or by a degree earned abroad that qualifies them for equivalent doctoral studies in the country where the degree was earned.

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 in a country that does not follow the Bologna Process must include a minimum of 4 years of studies and a master's thesis, and be deemed by the School as providing the student with an adequate knowledge base for doctoral studies in the CHEM.

An applicant with an applicable polytechnic master's degree from Finland is assessed by the School for his/her potential to complete doctoral studies successfully in the Aalto University. Granting the right to study requires the School to determine the applicant's need for supplementary 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 a master's degree before applying for a right to pursue a doctoral one. 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.

Students holding a master's degree earned abroad are eligible for doctoral studies at the School of Chemical Engineering provided their master's degree qualifies them for equivalent doctoral studies in the country where the degree was earned.

Prerequisites

The following is required for an applicant to be approved for doctoral studies

- Adequate knowledge in his or her confirmed research field, gained through, for example, courses toward the major or courses in the advanced module within the Master's studies, or the equivalent.
- Completing studies that support writing thesis also require sufficient basic knowledge.
- When necessary, the School will set prerequisites for admission into the doctoral programme that may be gained, for instance, by earning the credits for them by taking exams related to master-level courses.

General requirements for the all applicants at Aalto CHEM

- Earned the master's degree that is the basis of doctoral studies with **an average grade of 3.5 / very good (Aalto University uses the grading scale 1-5).**
- OR Those with a master's degree earned in accordance with the degree regulations of 1995, must have accomplished the major studies (minimum 30 cr.) in the master's degree that is the basis of doctoral studies with an average grade of 3.5/5.
- Completed **the master's thesis with the grade of 4.0 / very good (Aalto University uses the grading scale 1-5).**
- The same requirements apply to degrees earned elsewhere in Finland or abroad.

Students who fail to meet these criteria but are otherwise suitable for doctoral studies may improve their grades by taking courses, or the School may set prerequisites for doctoral studies. In addition to courses taken at the School of Chemical Engineering, the School may, based on the proposal of the supervising professor of research field, accept the courses taken at other universities.

Selection criteria for academic evaluation

- Contents of the previous degree(s)
- Previous study achievements and the duration of studies

- The quality and international regard of the applicant's degree and university
- Research potential, previous research experience: work experience in the research sector, scientific publications, conference papers, etc.
- Appropriateness of the research topic: with respect to the School's and Department's focus areas so that proficient guidance and mentor's genuine scientific interest are possible
- Research plan: theoretical and practical relevance and novelty of the topic, and feasibility of the plan (quality, realism, methodical approach etc.)
- Effort and resources for doctoral studies: feasibility of the study plan, realistic time available for studying and research during the forthcoming 4 years, and motivation and commitment to the work required by doctoral studies
- Time management, funding and resources: the feasibility of the study plan and the funding, supervision resources and time available for the doctoral studies in the next four (4) years.
- 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 may set prerequisites for entry. Admission criteria may be departed from on the grounds of the supervising professor's written statement.

In addition to the above mentioned criteria also the resources of Department to supervise and fund doctoral students will be noticed. A minimum of one year funding is required to start the doctoral research project. However there are no exact admission quotas.

Language requirements

Students applying for a Doctoral degree

Successful applicants must have an excellent command of Finnish, Swedish or English.

All international students applying for doctoral studies must demonstrate their proficiency in English. Applicants are required to attach an official language test report to their application.

Recognised language tests and minimum score requirements

- **IELTS** (Academic IELTS only): 6.5, and 5.5 for Writing
- **TOEFL:**
 - IBT (Internet-based Test): 92, and 22 for Writing *or*
 - PBT (Paper-based Test): 580, and 4.0 for Writing *or*
 - PDT (Paper-Delivered Test) Reading 22, Listening 22, and Writing 24
- **Pearson Test of English Academic** (PTE A): 62, and 54 for Writing
- **Cambridge English Qualification:**
 - C1 Advanced (former name Cambridge Certificate in Advanced English, CAE): A,B or C
- C2 Proficiency (former name Cambridge Certificate of Proficiency in English, CPE): A,B,C or Level C1

IELTS, TOEFL and PTE results are valid for two years starting from the test date. Thus the oldest acceptable test date during the 2019 application period is **1 September 2017**. C1 Advanced and C2 Proficiency results do not have an expiration date, however only tests that can be verified online, i.e. tests taken after 2005, are accepted.

The following groups are exempted from the language test requirement:

Applicants who have completed a higher education degree

- instructed in Finnish, Swedish or English at a Finnish university or a university of applied sciences.
- instructed entirely in English at a university or a university of applied sciences in an EU/EEA country. The official language of the degree programme has to be stated in the degree certificate or its supplement, in the transcript of records or in an official document issued by the higher education institution in question.
- instructed in English at a higher education institution that is *physically located* in one of the following countries: USA, Canada, UK, Ireland, Australia or New Zealand.
- 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.

Applicants who

- have studied as exchange students (a transcript of records is requested) in the field of science and technology at Aalto University (will be removed starting from 1.1.2020)
- are EU/EEA citizens from partner universities of Aalto University in the field of science and technology (Erasmus partners, TIME, Cluster, NordTek, Nordic5Tech) or applicants from a university with an inter-institutional agreement on student exchange with Aalto University in the field of science and technology. *Such applicants must have completed the language studies required for the degree in English language. This should be stated in their official transcript of records. If language studies in English are not included in the degree, the applicants must provide a certificate of sufficient English language proficiency provided by their home higher education institution.*

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.

Research fields, professors and funding of doctoral studies

Before submitting the application, each applicant must contact a professor in charge of 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.

Supervising professors for the research fields of the doctoral programme are listed [here](#).

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 student. More information about the rights and responsibilities of the student and the supervising professor [here](#).

Doctoral candidates can avail of various alternatives to finance their studies and research work. Funding can be discussed with the supervising professor. For employment by research projects: see open positions at Aalto University <http://www.aalto.fi/en/about/careers/jobs/>. More information under [Financing and promoting your research](#).

Application instructions

Please note: From 1 August 2016 onwards students 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 student postpones the commencement of studies or gives up her/his right to study, the student cannot accept another study place leading to a higher education degree starting the same academic term.*

The School of Chemical Engineering has two annual application cycles for doctoral degree studies. The autumn season deadline for applications is

- **30 September 2019 at 15:00 Finnish time.**

Applicant must submit the electronic application and all required attachments within the dead line.

Link to the electronic application form for doctoral degree studies will open next time on 2nd Sep. 2019. Only complete applications will be processed.

Please note: The open call for [school funded doctoral positions with Aalto CHEM's funding](#) will be open from the September 2, until September 23, 2019. If you are already Aalto CHEM doctoral student and applying for school's funding: please see instructions at the end of this section.

Application periods

Please note that a study right can be applied for only in March and in September. Please see the exact deadlines below. Applications submitted in March will be evaluated in the meeting in April and applications submitted in September will be evaluated in the October meeting. Final decision will be made in early May, or early November, if all documents have been submitted. After decision has been made, student must accept the study place at the application platform (eAge), otherwise we cannot proceed with the study right registration.

Spring term 2019

Deadline	Committee meeting	Dean grants study rights
29 March	25 April	Appr. early May

Autumn term 2019

Deadline	Committee meeting	Dean grants study rights
30 Sep.	23 October	early November

Application How-to-do-it

Before applying, please check the basic requirements for eligibility to doctoral studies from the beginning of this page. Contact Aalto [CHEM professor responsible for your field of research](#) at early stage of application process. Funding should be discussed and planned with the supervising professor or thesis advisor. For employment by research projects: see and apply for the open positions at Aalto University <http://www.aalto.fi/en/about/careers/jobs/>

Log in to electronic application system. Fill-in Aalto University's application form for doctoral studies. If you are applying from outside of Aalto University, register as user for this apply form system. All the attachments must be submitted as **pdf-files**.

Application form

- [Fill in the application form](#) (link will be available during the application period 2-30 September 2019, until 15:00 Finnish time) and attach required appendices (see below).
- **Please note that if you also apply for Aalto CHEM's funding, the deadline for application is 23 Sep. 2019 (until 15:00 Finnish time).** Please see [Aalto CHEM's funding](#) for details.

Detailed instructions for the application form:

- Definition for [full-time and part-time](#) doctoral candidate.
- Language of the degree: Choose English unless you write your dissertation in FIN/SWE. More information [here](#).
- Position funding: Choose "Aalto funded position" only if you apply for the Aalto CHEM's funding. If you have other funding source but you also apply for Aalto CHEM's funding, choose "Aalto funded position or other funding". Please check also the deadline for Aalto CHEM's funding. If funding comes entirely from a project or another source, choose "Other funding".
- Last name and all first names - the spelling of names must match your valid passport.
- Contact Information - e-mail address will be used to submit all information of application and decision process to the applicant.
- If you haven't completed your Master's degree by the application dead line, check from your home university the graduation schedule and the date for acquiring your official degree certificate. Only applicants acquiring their Master's degree certificate within next 3 months can apply for [conditional](#) study right. The conditional study right will expire if candidate does not fulfill all requirements of School of Chemical Engineering for doctoral student within the time limit stated at official decision.
- Please attach required appendices (below) as **pdf-files** to the application form (except appendix 3, study plan, which is submitted separately using the link below). All appendices are placed under heading "Appendices".

Appendices for the application

1. **Curriculum vitae (CV)**, max. two (2) pages, in English. Including the detailed information of scientific activity (publications, submitted publications, conference presentations (talks and posters) and patents). For more information of academic CV, please refer to the [curriculum vitae instructions and template for Finnish research organisations](#).
2. **Research plan with funding plan**, written by applicant under supervision of professor. In English, total of two pages. Please see more below *.
3. **Study plan for theoretical studies** - [link for electronic form](#) (LINK updated 6.9.2019, it was not working properly before that). Only fill in the electronic form, do not attach it to the application form. Read **instructions** for the [content of study plan \(40 cr.\)](#). All applicants are strongly recommended to include course CHEM-L1000 Toolkit for Doctoral Studies (5 cr) starting each autumn term. Browse for suitable doctoral level courses in WebOodi, and from [Doctoral level courses at Aalto CHEM page](#). Note the abbreviation L/P for doctoral level courses provided by Aalto University.
4. **Form for supervision plan**. Paper version with all signatures, include as a scanned pdf to your application. Read carefully the guidelines approved by the Aalto University academic affairs committee which give [detailed information of the duties and responsibilities between the supervising professor and the doctoral candidate](#). At the School of Chemical Engineering, doctoral candidate has 1-3 thesis advisor(s). Supervising professor can be one of thesis advisors.
5. Applicant's **motivation letter** in English, one page. Include as an attachment to the application form (not only as text in to the application form motivation question).
6. Applicant's **description of previous research work**, such as Master's thesis. Please describe your research experience in your own words. One page, in English.
7. Letter from Aalto CHEM supervising professor. Professor will submit the letter directly to the Doctoral Programme Committee. With this letter professor has a chance to highlight the special skills and potential of applicant. Confidential letter, which applicant can see only by requesting that from the officer in charge of evaluation process.
8. Any **other supporting documents**, such as letter of recommendation. Letter must include the explanation how the applicant has become known to the person giving the letter. Max. 2 letters.
9. Official English **abstract** of Master's thesis.
10. Copy of the holder page of your **passport or ID-card**.

Applicants with a **Master's degree earned at another university than Aalto University** (or Helsinki University of Technology) shall also provide:

11. Certified copies of **degree diplomas and transcript** of completed courses, together with a translation of these if the original documents are not in Finnish, Swedish or English. Transcripts of study records for B.Sc. and M.Sc. degree in English, Finnish or Swedish.
 - *Note: Applicants granted the doctoral study right at Aalto CHEM must present the original degree documents at the latest at the point of arrival to Aalto University.*
12. **Proof of proficiency in Finnish, Swedish or English** if the applicant is not a native speaker of or educated in any of them. Please check the English language requirements (above).

*Detailed instructions for the research plan:

- Research plan with funding plan is written by applicant under supervision of professor. **Before applying, the doctoral student candidate must make direct contact with a professor in his/her field of study** and present preliminary research plan and study plan to professor for discussion and modifications.
- Schedule of the research work and planned publications: time span of 3-4 years for full-time students and 4-8 years for part-time students; the schedule for the publications and completion of doctoral degree
- Implementation of the scientific plan
- Funding plan for the research work made by applicant. Funding plan in one section or as figure - state the start and ending of secured funding time and also suggest from where the missing funding will be acquired (scholarships, projects etc.). State clearly for which months the funding has been secured (example: May 2018- June 2021), and also uncertain funding seasons. Include also a list of all funding applications during the last six months. A minimum of one year funding is required to start the doctoral research project.
- The Supervising professor must confirm his/her commitment to supervise the thesis according to the schedule and resources of research plan.
- In English, total of two pages.

If you need more advice of applying and appendices, see the contact information.

Aalto CHEM's funding for doctoral students

Each year Dean of CHEM grants a few doctoral students with full funded doctoral position for 1-4 years. These positions must be applied within the annual call on September - on year 2019 the call is open during 2-23 September. More information under [Financing and promoting your research](#).

If you are already Aalto CHEM doctoral student and applying for school's funding, please fill in the application and attach appendices 1, 2, 5, 6, (7, from supervising professor), (8, optional).

The evaluation of these applicants for funded positions:

Applicants are primarily assessed on the basis of their potential to successfully complete the programme of study as well as the feasibility of the proposed research. Evaluation of new applicants for funded positions is based on the application documents, with special consideration of the following:

1. Study success, study time, applicant's academic achievements and research publications
2. Maturity, including motivation and background
3. Research plan
4. Recommendation letters and other relevant information of applicant's potential and skills.

Greater emphasis is placed on items 1 and 2.

Other information

Full-time and part-time studies

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

Full-time doctoral student

Students are entered into the register either as full-time or part-time doctoral students. Students may change their status only by application if there has been changes in the study activity and study plan and research plan has been updated to follow the current situation.

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 student 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 student

If the above criteria are not met, the student'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 Chemical Engineering 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 student

The doctoral student 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 student 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 student 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 student's own school together with the degree certificate application.

This guideline will take effect starting from 1.1.2016. Doctoral students 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 students.

Finnish or Swedish as a language of degree

A doctoral student 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 student 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 student can choose English as a language of degree.

If the doctoral student'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 makes a proposal to the Dean of the School of Chemical Engineering about selecting the doctoral students. Selection process takes approximately 5 weeks.

The Dean of the School grants the doctoral study rights for the doctoral students. All applicants receive written information of the decision to the email address they have provided during the application process. After the study right is granted, attendance is registered as soon as student has confirmed the study right at eAge platform.

All new students are registered as attending in the student register. During the first study year the student can enroll as a non-attending student based only on official documents of maternity or parental leave, national military or non-military service.