

1 INTRODUCTION

This is the master's thesis guide of Aalto University School of Chemical Engineering. The guide gives general information on the master's thesis as a study attainment, describing the whole thesis project, from starting of the work to the thesis approval. This master's thesis guide is intended as a tool for students writing a master's thesis, as well as for the thesis supervisors and advisors.

2 What is a master's thesis?

Master's thesis is a study attainment, which the student carries out at the final stages of her/his studies. For clarity, in this document terms *master's thesis project* and *master's thesis report* are used, the former referring to all the work the student does during this study attainment, and the latter referring to the written report on the project. During the master's thesis project the student typically aims at solving a problem relevant to the field of study. The work is based on existing scientific knowledge, and it is conducted according to the principles of scientific research, following good engineering and scientific practices and ethical guidelines. This work is documented in a scientific thesis report, which on one hand summarizes the relevant existing knowledge on the thesis project's topic area, and on the other hand, describes the research the student performed during the thesis project.

The master's thesis shall be written on a topic related to the advanced studies of the degree programme, agreed upon between the student and a professor who is either in charge of the research field linked with the topic or sufficiently specialised in the topic of the thesis.

The extent of the master's thesis as a study attainment is 30 credits (ECTS), equaling to 800 working hours. The period of time spent working on the master's thesis may in reality be longer than approx. 5 months if the student is at the same time carrying out other studies or duties.

The master's thesis includes not only the thesis but also the maturity essay and seminar presentation or a corresponding presentation.

3 LEARNING OUTCOMES OF THE MASTER'S THESIS

These learning outcomes describe the student's skills and competences, which should develop during the whole time span of the master's thesis project. The evaluation of the thesis measures this development. The learning outcomes are divided in four groups, describing the student's development in the areas of problem solving, knowledge in applying theories and methods in science and engineering, project management skills, as well as communication skills.

3.1 Problem-solving skills

After completing the master's thesis project, the student

- together with the cooperation partners, can define a clear scope for a research project, is able to formulate relevant and clear research questions, as well as describe logically the objectives of the project.
- can choose appropriate engineering or/and research methods and is able to apply the chosen methods in a logical way that fits the problem and the research questions.
- can work independently but is also able to seek for guidance and take advantage of the received advice.

3.2 Skills in applying scientific and engineering theories and methods in the topic area

After completing the master's thesis project, the student

- demonstrates understanding of the relevant technological and scientific concepts and theoretical frameworks in the topic area.
- displays ability of conducting work according to good engineering and scientific practices, following ethical guidelines.
- shows ability of discussing the results in the context of the topic area and the research questions, and is able to draw justified conclusions from the results.
- shows command of data acquisition, and can refer correctly to appropriate, up-to-date scientific literature and other relevant sources of information.

3.3 Project management skills

After completing the master's thesis project, the student

- displays ability of making a feasible and logical plan for an engineering or scientific project, and can implement the plan in an efficient manner, which does not significantly exceed the set deadlines.
- can manage the acquired information in an organized manner, and is able to follow the given guidelines for documenting and presenting the work.

3.4 Skills in scientific and professional communication

After completing the master's thesis project, the student

- can present results of an engineering or/and research process clearly and discuss critically their significance to the cooperation partners, and possibly to the scientific and engineering community.
- shows skill in formal writing and can write a report, which is easy to read and which forms a well-organised, coherent whole.
- has practiced oral communication in varying work-life situation: from day-to-day discussion with colleagues to presentation of the results in personal discussions as well as in project meetings with the cooperation partners.

4 ROLES AND STAGES OF THE MASTER'S THESIS PROCESS

During the master's thesis project, the student cooperates with a supervisor and one or two advisors. The student works during the thesis project independently, with the supervisor and advisor(s) offering support; ultimately, the student her/himself is responsible for the successful completion of the master's thesis project.

4.1 Thesis supervisor

The master's thesis supervisor shall be one of the professors of Aalto University as defined in Section 16 of the Aalto University Bylaws. For special reasons and by decision of the dean, the thesis supervisor may also be another professor, university lecturer or senior university lecturer of the school (not a docent). At the School of Chemical Engineering, master's theses may be supervised by adjunct professors, professors of practice and FiDiPro professors as well as senior university lecturers.

The supervisor ensures that the thesis meets all aims and requirements set by the School of Chemical Engineering. In his/her statement the supervisor evaluates the thesis and suggests a grade.

4.2 Thesis advisor

The thesis work may have one or two advisors. Thesis advisor is an expert in the field of the thesis topic and shall hold at least a master's degree. If the thesis project involves cooperation with a partner, such a private company or other organisation, the advisor normally represents the cooperating partner. The thesis advisor may also be an Aalto University researcher or doctoral student specialising in the field of the thesis.

The advisor's tasks include giving advice on practical work during the thesis project, as well as instructing writing the thesis report; however, the advisor is not responsible of grading the master's thesis. As the advisor typically instructs the student's work practically on daily basis, she/he has a good idea on the student's performance at the workplace. Therefore, the supervisor will ask the advisor's opinion on the student's performance during the master's thesis project. As the thesis projects are all different, the roles are not defined in more detail in this document. Nevertheless, it is necessary to discuss and define the division of the duties between the student, the advisor(s), and the supervisor when the thesis project is started. Also, it should be agreed how the student will communicate the progress of the work to the advisor(s) and the supervisor.

Neither the supervisor nor the advisors may be a relative of the student, or biased in any other way. Designation of the thesis supervisor and advisor must be done in compliance with the Aalto University policy on disqualification, available on [Inside](#).

4.3 Choice and approval of the topic

It is the student's responsibility to find her/himself a master's thesis topic. Master's thesis topic is related to the student's advanced studies (major). Finding a suitable topic may take time, and therefore it is highly recommended to start looking for it already several months before the

planned starting time of the thesis work. Topics are typically available in research being conducted at the school. It is also possible to find a master's thesis topic from companies, e.g. from an industrial facility where the student is working during summer holidays. The thesis topic is decided in discussions between the student and the supervisor; the student always makes the final choice.

If the thesis supervisor is not from the school of the student, the professor in charge of the major has to confirm that the topic of the thesis relates to the student's advanced studies.

The degree programme committee of the school approves the topic and the language of the master's thesis, and appoints a thesis supervisor and one or two thesis advisors for it. Before submitting the application, the student needs to

- be enrolled as an attending student.
- have her/his B.Sc. degree approved.
- have completed at least 45 ECTS credits towards the master's degree (40 cr of these studies need to belong to major studies).
- have her/his study plan (HOPS) for master's degree studies approved.
- have completed the possible complementary studies she/he was assigned when admitted to the study programme.

To obtain approval for the master's thesis topic from the Degree Programme Committee of the school, students submit the application to the eAge-system. The form includes the details of the thesis supervisor and those of thesis advisor(s), and the language of the master's thesis.

The thesis is written in either Finnish, Swedish or English. The language of the master's thesis determines the language of the student's degree, and therefore also the language of the degree certificate. Students writing their master's thesis in Finnish or Swedish have their language of degree determined accordingly, and receive the official degree certificate in either Finnish or Swedish; an English-language translation of the certificate is included. Students writing their master's thesis in English will have English as their language of degree and receive the official degree certificate in two languages: English and either Finnish or Swedish.

The thesis supervisor must recommend approval of the topic on the topic application form. For additional information, see [the electronic form](#). The topic of the master's thesis remains valid for one year as of the date of approval. It is good practice to not mention company or brand names or use any abbreviations in the topic (with the exception of well-known abbreviations accepted in standard language).

Since minor specifications to the topic are allowed after its approval but major changes require submitting a new application, all specifications and changes to the topic must be agreed upon with the thesis supervisor. The title of the master's thesis may be formulated to suit the topic; it does not have to be formulated exactly as it was in the application. The title of the thesis should be clear and as concise as possible.

It should be noted that the topic for the master's thesis project and the completed master's thesis report cannot be approved at the same meeting of the degree programme committee.

4.4 Preparing a research proposal

When the topic is suitable for a master's thesis project in the view of the supervisor, the student makes a research proposal in cooperation with the supervisor and the advisor(s).

The research proposal defines, for instance, the following:

- background, the theoretical framework and research problems
- objective of the thesis (main objective, interim objectives)
- research methods
- timetable and possible budget
- analysis, synthesis and conclusions

Often the main objective of the thesis is best put in the form of a question. The research problem and questions specify what the work aims to answer. The research proposal should also present some interim goals, for instance, finishing the literature review section, finishing the analysis section, and so forth. The research proposal is reviewed, for instance, in the kick-off meeting with the thesis supervisor and thesis advisor(s).

The deadline for the master's thesis shall be agreed upon between the thesis supervisor and the student and set at a date that is max. one year from the approval date of the topic.

The school may also organise master's thesis seminars, which are often associated with the initial stages of the master's thesis process, for instance with the presentation of research proposals. This allows students to get feedback and guidance from the other participants at the start of the process.

4.5 Master's thesis process

When the thesis supervisor and the thesis advisor(s) have approved the research proposal for the master's thesis, the actual execution of the thesis work starts. The total number of hours to be spent on the master's thesis is about 800. As a default, the duration of the execution phase should be ca. five months. Due to special circumstances, such as student's personal reasons – e.g. other concurrent studies – or the character of the experimental methods, the execution phase may be extended. However, this needs to be agreed upon between the student, supervisor, and advisor(s) preferably already in the kick-off meeting. Moreover, even if the duration of the master's thesis project is extended, the student's total workload shall not exceed 800 hours. At the start of the master's thesis project, students are recommended to focus on the written material so that the earlier research on the topic may best be put to use to support the research. The original research proposal may be modified slightly and specified as the study progresses and usually this is recommended.

Contacts between student and the professor supervising the thesis are usually frequent at the start and end of the research, while contacts to the thesis advisor(s) should be frequent throughout the thesis project. The key duty of the thesis supervisor is ensuring that the topic of the thesis is suitable and that the research proposal provides a framework for a successful execution of the thesis. The student may, however, always contact the thesis supervisor if questions arise regarding the progress of the work.

The thesis advisor(s) normally comment the student's work periodically throughout the thesis project. The student and the advisor(s) can agree on commenting the thesis manuscript, or parts of it, whenever convenient. The thesis advisor(s) should read the manuscript and comment on it in particular in the light of the goals set by the target organisation, which they represent. Based on the advisor(s) comments and suggestions, the student works on the manuscript. Once the quality of the manuscript is at the level the student and advisor(s) feel to be suitable, the supervisor will examine the thesis manuscript thoroughly and give the student feedback on the corrections and changes needed. It is a good practice also at this stage to discuss the learning outcomes and the evaluation criteria of the thesis. The student must reserve enough time for the examination process: the supervisor should have 2–3 weeks for reading, correcting, and commenting the manuscript.

When the student has made the corrections and changes suggested by the thesis supervisor, the thesis is resubmitted to the thesis supervisor for approval. The student should work carefully with the manuscript, reacting diligently to all of the supervisor's comments and aiming at producing a final version of the thesis for this review to avoid multiple correction rounds. When the supervisor has approved the corrections, she/he will give the student permission to submit the thesis for evaluation and publication.

Because all thesis projects – as well as students, advisors, and supervisors – are different, it is worth noting that the process with the thesis manuscript can be different from the process described above. However, it is good practice to agree upon the practicalities and deadlines with the thesis manuscript already when starting the master's thesis project.

4.6 Evaluation and approval of the master's thesis

When evaluating the thesis, these general principles apply:

1. Officially, the Degree Programme Committee gives the thesis grade, based on an evaluation report written by the thesis supervisor.
2. The evaluation covers the entire student's work during the whole thesis project; hence, it is not sufficient to evaluate the thesis report only.
3. The student's development during the master's thesis project is evaluated in the light of the learning outcomes, which are reflected in the evaluation criteria.
4. Only aspects, which are dependent on the student, can have an effect on the evaluation and grading. This means, for example, that if the thesis is delayed due to unexpected reasons, which the student cannot control (e.g. production stoppage at a factory, delayed service for broken laboratory equipment), the delay must not affect the thesis grade.
5. The thesis report is a document produced by the student; hence, the advisors' and the supervisor's role is to instruct the student on how to improve the quality of the text, not to rewrite the report. The legibility and quality of the student's written communication is one of the evaluation criteria for the thesis. Based on this, it is neither justified to require that an external professional proofread the thesis manuscript before its evaluation.

The learning outcomes of the thesis, as well as the evaluation criteria and the minimum criteria for each grade, shall be presented at the kick-off meeting of the master's thesis project. The thesis supervisor is responsible of ensuring that the thesis advisor is aware of the evaluation criteria of the Aalto master's theses, particularly in cases where the student performs her/his work outside Aalto University.

The evaluation and approval of a completed master's thesis is applied for with an electronic form through [eAge](#). After submission of the thesis, the supervisor has to give her/his evaluation report within four weeks. With this in mind, students should consider carefully into which of the Degree Programme Committee meetings they are submitting their thesis for approval. The meeting dates are listed [here](#).

The guidelines for master's thesis evaluation defined by the School of Chemical Engineering can be found in the evaluation form. The thesis supervisor's evaluation report shall follow these guidelines, including a written statement on the thesis with a proposal for a grade. The supervisor submits this examiner's report to the Degree Programme Committee. When preparing the report, the supervisor requests statement(s) from the thesis advisor(s). It is also highly recommended that the supervisor, advisor(s), and the student have a meeting on the evaluation, where the supervisor justifies the given grade, based on the evaluation criteria. In cases where the supervisor has proposed the grade of 'excellent' (5), 'satisfactory' (1), or 'fail', the Degree Programme Committee shall, when possible, consult a university professor, adjunct professor, professor of practice, FiDiPro professor or senior university lecturer with expertise in the research field when deciding on the grade. Having familiarized itself with the examiner's report and any additional statements, the Degree Programme Committee shall decide on the approval of the thesis and on its grading. If the Degree Programme Committee does not approve the thesis or grade it, the application is returned to the student.

Students who fail to submit the master's thesis for examination by the deadline shall submit a new thesis topic application to the school. Since delay in the writing process may lower the grade, students are advised against delaying the thesis writing by taking up other commitments before the thesis is ready.

4.7 Presenting the master's thesis

The master's thesis process also includes presentation of the finished thesis at a time agreed upon with the thesis supervisor. The presentation or similar event to showcase the thesis has to be held before the master's thesis is approved and evaluated.

4.8 Maturity essay

The master's thesis author must write a maturity essay to demonstrate conversance with the field of the thesis (and possibly proficiency in the language s/he has been educated in (Finnish or Swedish)).

The maturity essay may be

- an essay written on a topic given by the thesis supervisor and written under supervision.
- a press release. (only when the language proficiency is not needed)

The maturity essay must be written before the approval of the master's thesis.

The contents of the maturity essay are reviewed by the thesis supervisor, while its language (if Finnish or Swedish) is evaluated by the Language Centre, provided that the student has not demonstrated the requisite language proficiency in a maturity essay written for the bachelor's degree. The language of the maturity essay may be failed if it does not meet the degree requirements.

Students are to reserve about 14 days for the language check from the date of receipt of the text by the Language Centre. The maturity essay is graded on a pass/fail basis, and its grade does not affect the grade of the master's thesis. The credits for an approved maturity essay are given by the master's thesis supervisor. A failed maturity essay may be retaken.

Students, who have been educated in Finnish or Swedish and have not demonstrated their language proficiency previously in a maturity essay for a bachelor's degree, shall write the maturity essay in the language in which they have been educated at the primary and secondary levels (Finnish or Swedish). If the student is not required to demonstrate language proficiency in Finnish or Swedish, the maturity essay may be written in the language that was approved for the master's thesis. The requirement of a maturity essay also applies to international students, who usually write their maturity essays in English. Maturity essays written in other languages than Finnish or Swedish are only subjected to a review of the contents, not of the language.

4.9 Grade appeals

Students dissatisfied with the grade of their thesis may appeal against the decision in writing to the Aalto University Academic Appeals Board within 14 days of receiving notification of the decision. The appeal shall arrive at the university before the closing time of the Registry (at 15.00) on the deadline date.

If the student is notified of the decision by an electronic message (by e-mail), the notification is deemed to have been received by the student on the third (3) day after mailing, unless proven otherwise. If the student is notified of the decision by mail, the notification is deemed to have been received by the student on the seventh (7) day after mailing unless proven otherwise.

The appeal is addressed to the Aalto University Academic Appeals Board to:
The Aalto University Academic Appeals Board, Registry, P.O. Box 11000, FI-00076 AALTO
kirjaamo@aalto.fi

The appeal must specify the following: 1. student name and contact information (address, e-mail address and telephone number) 2. information of when the student was notified of the decision and 3. decision (incl. name of thesis and name of person responsible for grading), 4. the change sought with the appeal, 5. grounds for the appeal (copies of documents on which the student bases his/her appeal if not already submitted to Aalto University).

4.10 Electronic version of the master's thesis and online publishing

The electronic publication of the master's thesis allows distributing the research results on a global scale, which is useful, for instance, if applying for a job or study place abroad. An electronic master's thesis is easy to find with internet search engines like Google.

Aalto University publishes the metadata of all theses online in the INSSI database. The metadata includes the author, title and translated title, thesis supervisor and thesis advisor and key words. All approved theses are archived as full-text versions in the Aaltodoc publication archive. The abstract and/or the full text are also published if the student has given his/her consent to it. The permission to publish is given via the e-transaction system when requesting approval for the thesis.

5 GENERAL INSTRUCTIONS ON WRITING THE THESIS REPORT

The actual guidelines for formatting the master's thesis report, including tips on the presentation style (font, line spacing, margins, referencing) are available on the [Into website](#).

The master's thesis report is a concise, clearly written and finalised written presentation of a topic, with the maximum length of 70–80 pages with appendices. The appearance of the thesis must be neat, organised and elegant. Right alignment and use of headers and footers are optional, and the page number format may be chosen by the student.

Students are recommended to illustrate the thesis with appropriate figures and tables. Tables are good for presenting exact values. Instructions on using figures and tables are given various writing manuals.

5.1 Collecting source literature and seeking information

Before starting writing the master's thesis report, the student collects and lists source literature. In the beginning, it is worth going through a sufficient amount of reference material. The literature review may be performed manually by seeking information in the sources of the library or by searching related references in Finnish and international databases.

Finding suitable and reliable information for the master's thesis may prove challenging. There are many ways to seek information, for instance, reference and full text databases, international sources, articles in scientific journals, reviews, congress papers, theses and international societies of the discipline. Internet directories and link lists should be used with caution: for instance, Wikipedia is not an appropriate source.

The information specialists of the library will help you in seeking information and in using the information systems and material provided by [the library](#). You can turn to an information specialist for instance in questions related to information search for theses.

5.2 List of references and compiling it

The starting point is that a reference must always be given in the thesis text if you are not stating your own interpretation or conclusion or 'general knowledge'. This means that references must be given, for instance, when presenting the results or claims made by another researcher or using a table or figure taken from someone else's work. A direct quote is put in quotation marks. References should be made to original sources or as close to an original source as possible and not to a later publication that refers to the original source.

Compiling a list of references is a central part of scientific publishing. The use of references has been stipulated in the Copyright Act (Tekijänoikeuslaki 404/1961), and the appearance of references to printed material has been defined in the SFS standard 5342 and that of references to electronic material in the SFS standard 5831. The list may be compiled in several ways depending on the system used. The two most common systems are the Harvard system, which is recommended also for the thesis, and numeric referencing. Since the referencing systems used at Aalto

University may vary by degree programme/major it is best to ask for detailed instructions from the thesis supervisor.

5.3 Academic integrity in writing the master's thesis

Under the Aalto University General Regulations on Teaching and Studying, all teaching and studying must take into consideration responsible conduct of research. Students shall familiarise themselves with the available instructions and ask for assistance if instructions are unclear. (Aalto University General Regulations on Teaching and Studying.)

[Code of conduct](#) defines responsible conduct at Aalto University.

Misconduct, plagiarism and consequences thereof

In a studying context, misconduct is first and foremost defined as a deliberate act or means of misrepresenting one's own or someone else's level of competence. Forms of misconduct include fabrication, misrepresentation and unacknowledged borrowing or plagiarism.

Plagiarism, or unacknowledged borrowing, refers to representing another person's material as one's own without appropriate references. This includes research plans, manuscripts, articles, other texts or parts of them, visual materials, or translations. Plagiarism includes direct copying as well as adapted copying. (Aalto University Code of Academic Integrity, Item 3.3).

In accordance with the Aalto University General Regulations on Teaching and Studying, a study attainment may be left ungraded if the student is deemed to have violated against the Code of Academic Integrity while completing it. For details on the Code of Academic Integrity and the consequences of violating it and related processes, see [the Into portal](#) (Academic regulations).

Electronic originality check

Aalto University has a university-level electronic system which recognises similarities between written texts and thus helps in the detection of plagiarism.

6 PUBLICITY AND COPYRIGHT OF THE MASTER'S THESIS REPORT

The master's thesis report is a public document which shall be available at the school (Degree Regulations of the Aalto University School of Chemical Engineering). Issues related to the copyright of the master's thesis report are resolved in accordance with the general copyright legislation, and inventions made during the master's thesis process are solved in accordance with valid patent legislation.

The master's thesis report is a public document usually not covered by confidentiality provisions; hence, information, which is not seen as covered by the principle of openness and cannot be regarded public, must not be included in the master's thesis report. The thesis may, however, include information about trade or business secrets, patentable inventions etc. In such cases, the

author of the thesis and the thesis advisor(s) must agree upon the details included in the master's thesis.

Aalto University has made a contract template to be used when students agree upon making a master's thesis with an external collaboration organisation. It should particularly be noted that the contract is always made between the student and the external organisation and it should be communicated to the thesis supervisor. The contract includes, for instance, provisions on the copy-rights of the thesis.

[Contract template](#) and [guidelines on its application](#)

7 SUPPORTING THE THESIS PROCESS

The Aalto University Library and Information Services, the Language Centre and various departments offer courses to help students in writing the thesis report. Contact the planning officer of your degree programme for details.

Students writing their master's thesis report in English may attend the Writing Clinic tutoring service of the Aalto University Language Centre. For additional information, visit the [Language Centre website](#).

8 LITERATURE AND LINKS

Kauranen I., Mustakallio M. ja Palmgren V. 2006. Tutkimusraportin kirjoittamisen opas opinnäytetyön tekijöille. Otaniemi TKK. 109 s. ISBN 951-22-8359-x.

Nykänen, O. 2002. Toimivaa tekstiä. Opas tekniikasta kirjoittaville. Helsinki TEK. 212 s. ISBN 952-5005-64-X

Heikkinen, R. 2005. Tiedonhakijan teho-opas. Jyväskylä: Docendo, 2005. 154 s. ISBN 951-846-258-5

Novak, J. 2002. Tiedon oppiminen, luominen ja käyttö : käsittekartat työvälineinä oppilaitoksissa ja yrityksissä. Jyväskylä: PS-kustannus. ISBN 952-451-057-X

Coghill, Anne M., Garson, Lorrin M. 2006: The ACS Style Guide: Effective Communication of Scientific Information. New York: Oxford University Press, Inc. ISBN13: 9780841239999.
<https://pubs.acs.org/isbn/9780841239999> (accessed 2.7.2018)

[Aalto University resource guides](#)

[Aaltodoc](https://aaltodoc.aalto.fi/?locale-attribute=en) (<https://aaltodoc.aalto.fi/?locale-attribute=en>) – Full-text publications of the Aalto University schools: theses, reports, conference and other publications.

Academic phrasebank: <http://www.phrasebank.manchester.ac.uk/>

Monash University guides: <https://www.monash.edu/rlo/quick-study-guides>

American Chemical Society style guide: <https://pubs.acs.org/isbn/9780841239999>

Statutory insurance for students: Accidents and damages during study: <https://into.aalto.fi/display/enopisk/Statutory+insurance+for+students>

9 APPENDICES

APPENDIX 1: Thesis feedback form and instructions for an advisor

APPENDIX 2: Step by step process description

Thesis feedback form for an advisor

STUDENT:

Assess the student's performance in working life skills and competences using the following table. <i>(1 = satisfactory, 2 = very satisfactory, 3 = good, 4 = very good, 5 = excellent).</i>					
Areas	1	2	3	4	5
Communication					
The student presented his or her written message with clarity and integrity					
The student communicated orally with clarity during the work					
The student followed given instructions and asked further information when necessary					
Project and team work skills					
The student planned his or her work with precision					
The student was able to complete the work according to the agreed schedule					
The student showed ability to work independently					
The student was committed and performed the tasks agreed upon					
The student had a positive attitude in workplace environment					
Experimental work and results					
The student demonstrated ability to conduct experimental work					
The student presented well-founded conclusions drawn from the results					

Formulate a short written feedback on the student's performance and command of topics in terms of academic and engineering viewpoints in addition to working life skills.
Describe e.g. how the student demonstrates command of the topic, understands the scope of research, conducts experiments and their planning, and presents conclusions drawn from the results.

Aalto University
School of Chemical Engineering
Instructions for an advisor of master's thesis

Role and responsibilities of an advisor

- familiarize yourself with the thesis being evaluated
- support the student in practical work to achieve the agreed goals
- give feedback about the student's thesis and practical progress in all different phases of the work:
 - ✓ goals and targets
 - ✓ table of contents
 - ✓ literature part
 - ✓ experimental part
 - ✓ final version
- It is important to note, that the advisor does not grade the thesis work. This is the duty of the supervisor, who will perform the academic evaluation of the thesis and will deliver the grade proposal to the degree programme committee. However, the advisor will give his or her own feedback to the supervisor on the student's performance during the work.

Hints to advisors

- Commit yourself to advising and reserve enough time (30-50 hours) for it (individual meetings as well)
- Emphasize the active role of the student in meeting arrangements
- Clarify the objectives and the requirements of the work to yourself
- Outline the subject thoroughly and in such a way that material can be found about it
- Set clear goals for each milestone and deadline
- Make sure that the student has understood the timetable given at the beginning. Hold on to it!
- Remember positive feedback, and compliment the student even on a good effort
- Encourage the student, for example, to try finding information from different places or to try writing differently than before
- Supervision can be put to your resume
- It is recommendable to have meetings frequently in the beginning in order for the student to get off to a good start

Schedule	Thesis project	Administrative schedule
Defining the topic		
Topic (month 1)	Student proposes a Master's thesis topic ((Student, thesis advisor(s) and supervisor)	See study administration schedule Master's thesis guidelines
	Kick-off meeting ((Student, thesis advisor(s) and supervisor)	The student applies for a master's thesis topic in (eAge) from the Degree Programme Committee: <ul style="list-style-type: none"> • topic • language • advisors • supervisor • supervisor's approval of the topic
		The Degree Programme Committee approves the topic and the language of the master's thesis, and appoints a thesis supervisor and one or two thesis advisors for it <ul style="list-style-type: none"> • Topic is valid for one year
Executing the thesis project		
months 1-5	The student prepares a research plan for the master's thesis project	
months 1-5	Supervision and feedback of the master's thesis project (thesis advisor(s))	
month 1	Literature acquisition	
month 2-3	Experimental works	
month 4	Collecting the results and writing the experimental part of the report	
month 5	Completed thesis report	
month 5	The student submits the complete master's thesis report for review to the thesis supervisor	

month 4-5	The student agrees with the supervisor the schedule of: <ul style="list-style-type: none"> • maturity essay • thesis presentation • thesis evaluation 	
		The thesis supervisor reviews the contents of the maturity essay and submits a notification to the Student Services of the degree programme of an approved maturity essay.
Evaluation		
months 5-6	The schedule agreed upon with the supervisor	See study administration schedule
	The advisor(s) give(s) the thesis advisor's evaluation form to the supervisor	
	Feedback discussion: student and supervisor. It is recommended that the thesis advisor(s) is also present.	
	The student requests evaluation of the master's thesis (eAge)	Application deadline for approval of the thesis is the date the Master's thesis will be registered to
max. 1 month after request		The thesis supervisor evaluates the master's thesis and submits a statement on it to the student services
		The Degree Programme Committee approves and evaluates the master's theses
		The Student Services of the degree programme informs the student of the decision by the Degree Programme Committee , issues the student with a copy of the thesis supervisor's statement, and enters the data into student register