D-MAVT Complementary Regulations on Doctoral Affairs

The Department Conference of the D-MAVT adopted the following regulations on 17 December 2013. The Department Conference approved on 17 May 2016 the present regulations with the changes proposed by the doctoral committee and approved by Professors' Conference on 10 May 2016.

These regulations are framed on the basis of the following procedures and rules, and in reference to the following conferences and discussions:

1) the Ordinance on Doctoral Studies ETH Zurich, dated 1 July 2008 (version: 1 November 2013);
2) the Rector's Implementation Provisions for the Doctorate Ordinance of 2008, dated 17 October 2013 (version: 1 November 2013);
3) the Procedural Rules (GO) of D-MAVT, dated 17 December 2013 (in German);
4) the Detailed Regulations for Doctoral Studies at D-MAVT (17 December 2013, approved by the Rector on 11 March 2014, in German);
5) decisions taken in previous Professors' Conferences or in Department Conferences (05.03.2014, 23.09.2014, 30.09.2014, 03.03.2015, 12.05.2015, 22.09.2015);
6) standing procedures and discussions in working groups.

Changes to these complementary regulations require formal approval of the Department Conference of the D-MAVT.

1. Doctoral committee (Art. 4 of the Ordinance)

1.1 Composition

The doctoral committee is composed of seven professors (D-MAVT professors).

Members of the doctoral committee are elected by the Department Conference.

The Head of the doctoral committee is the Deputy Head of D-MAVT, who acts as Delegate of Doctoral Affairs.

Members are elected for a two-year term. Re-election is possible. At least 50% of the members must be renewed every two years.

The D-MAVT Doctoral Administration provides the Rector with information on the composition of the doctoral committee.

1.2 Responsibilities

The doctoral committee has the following responsibilities:

- decisions on admission of candidates who are not required to take qualifying examinations (decision by Head of the doctoral committee);
- decisions on admission of candidates who are required to take qualifying examinations (decision sent via e-mail on request);
2. Thesis supervisor (Art. 6 of the Ordinance)

Accredited and Titular professors elected in D-MAVT may act as supervisors for doctoral theses. In the case of Titular professors, at least one elected ETH Zurich professor must be a member of the examination committee, acting as co-examiner.

3. Admission (Art. 9 of the Ordinance)

3.1 Admission recommendation “without additional requirements”

If the Vice-Rector for Doctoral Studies recommends admission “without additional requirements”:

a) the Doctoral Administration informs the supervisor;
b) the supervisor may agree with the recommendation of the Vice-Rector;
c) the supervisor may decide that additional requirements are necessary and subsequently submit a proposal in accordance with the rules of the Rectorate. The supervisor may require up to three exams;
d) in case of c) “additional requirements requested by the supervisor”, the Doctoral Administration informs the doctoral committee, which approves/rejects the additional requirements;
e) the Head of the doctoral committee signs the letter with the final decision of D-MAVT on the admission (without b) or with additional requirements c), d));
f) the Doctoral Administration sends the dossier with the decision to the Rectorate.

3.2 Admission recommendation “with additional admission requirements”

If the Vice-Rector for Doctoral Studies recommends additional admission requirements due to insufficient scientific credentials or because the university degree attained is not equivalent to a Master’s degree from ETH Zurich, etc., the Doctoral Administration informs the supervisor and requests a proposal for additional requirements:

a) the candidate must take at least three qualifying exams that meet the requirements of MAVT:
   i. Master’s level;
   ii. oral exam lasting at least 30 minutes;
   iii. repetition only upon approval by the supervisor;
   iv. deadlines as set by the Rectorate;
b) no more than one exam may be given by the supervisor or the supervisor’s group;
c) the modus may be either oral or written, as stipulated in the Course Catalogue, or as stipulated by the examining professor;
d) following formal evaluation by the D-MAVT Doctoral Administration, the doctoral committee reviews the proposed qualifying exams and approves/rejects the qualifying exams;
e) the Head of the doctoral committee signs the letter with the final decision of the D-MAVT on admission with additional qualifying exams;
f) the Doctoral Administration sends the dossier with the decision to the Rectorate.

A candidate with a Master’s degree from MAVT and a final overall grade ≥5.00 will be admitted without additional exams, also if the Vice-Rector recommends it.

In case the qualifications of the students are considered insufficient for D-MAVT, the doctoral committee can request six additional exams, according to previous requirements.
4. External thesis (Art. 16 of the Ordinance)

At the Rector's request, the Department Conference approves/rejects permission for a doctoral thesis to be pursued outside the ETH Domain.

D-MAVT defines the following procedure and documents for the final decision in DK about an external thesis:

a) Confirmation that the external institution agrees to be bound by the provisions of ETH Zurich rules: “the external institution does not impose any order which would hinder the supervision of the doctoral candidate by the ETH supervisor or restrict timely publication of the research results”. (Form “Thesis project outside the ETH Domain”, part of the application’s dossier).

b) Outline of proposed thesis (part of the application’s dossier) with the title of the doctoral thesis.

c) Declaration of the company that the doctoral student is working for the doctoral thesis (definition of the time available for the research and courses) and declaration of the duties.

d) The supervisor must provide on written for the doctoral committee and the PK/DK:
   I. the reasons why the doctoral thesis should be pursued outside ETH and in the company
   II. the name and function of an experienced and qualified person at the external institution who supervises the student at the external institution
   III. plan of the activities at ETH Zürich (credits, discussions, meeting with supervisor, milestones)
   IV. an additional independent professor acting as a co-examiner

e) The doctoral committee checks the documents and make a suggestion for PK/DK.

f) The list of the external theses is distributed in PK/DK one week in advance

g) Members of DK have access to the dossier in the Doctoral Administration

h) The supervisor at D-MAVT or a suitable representative of the supervisor attends PK and DK in order to answer potential questions.

Approval is only granted if the thesis topic requires that the project be pursued at an external institution and if all prerequisites are fulfilled. The Department Conference decides about approval, rejection or postponement of the request and informs the Rector of the decision.

5. Research plan (Art. 11 of Ordinance)

5.1 Submission and structure

The research plan must be submitted to the Doctoral Administration within 12 months of receiving provisional admission to doctoral study, along with the form “Approval of the research plan” signed by the supervisor.

The structure of the research plan is as follows:

a) cover sheet with a working title of the thesis and the current date, and with the name and signature of the doctoral candidate, the supervisor, and, if possible, of the co-examiners;

b) abstract, max. ½ page;

c) scope of the project, research tasks;

d) relevance and relation to current work carried out at the institute/department;

e) literature review;

f) capacity for additional research;

g) time schedule;

h) planned publications;

i) teaching tasks;

j) additional duties of the doctoral candidate.

5.2 Approval and registration

Approval and registration ensue as follows:
5.3 Deadline

The Doctoral Administration checks regularly if the research plans are delivered in time according to ETH regulations (within twelve months of registration) and sends a reminder to the doctoral student and the supervisor close to the deadline.

If the deadline of the research plan has not been respected, the following procedure applies:

- In case the deadline cannot be met, a request for a deadline extension with reasons and proposed new deadline, signed by supervisor must be submitted (ETH form) to the D-MAVT Doctoral Administration. The Delegate of the Doctoral Affairs approves, signs and forwards it to the ETH Doctoral Administration. In case of denial, the Delegate will inform the supervisor and the doctoral student to discuss the situation.
- In case the research plan has not been submitted after 6 months from the deadline, the Delegate of the Doctoral Affairs requests a meeting with the supervisor and the doctoral student, to discuss the situation.

6. Thesis supervision (Art. 15 of the Ordinance)

The supervisor informs the Doctoral Administration via e-mail about the proposed co-examiner(s); the e-mail includes the name of the doctoral candidate, proposed co-examiner(s), title, affiliation, e-mail, CV or link to the respective homepage.

Definition of the co-examiners for a doctoral thesis in D-MAVT:

- At least one co-examiner has to have a Dr. degree.
- For external theses: at least one co-examiner has not been involved in the research and has to be an independent professor, identified at the beginning of the external thesis.

Every three months, the doctoral committee approves/rejects co-examiners who have been proposed by the supervisors and who have been formally evaluated by the Doctoral Administration. After approval by the doctoral committee, the Head of the doctoral committee informs the Rectorate (ETH form).

7. Cumulative thesis (Art. 10b, Rector’s Implementation Provisions)

A doctoral candidate may submit a doctoral thesis in the form of a “cumulative” thesis. If the thesis is declared as “cumulative”, in the sense that it consists on several publications (published or accepted in a peer reviewed journal (ISI journals or comparable standard), following requirements must be satisfied:

a) the doctoral candidate must be the first author of all publications;
b) an extended introduction chapter which includes:
   I. the overriding research question;
   II. the methodology used;
   III. the relevance and the contribution of the thesis to specific subjects;
c) an extended conclusion chapter which integrates the results of the different publications and includes suggestions for future research, plus providing evidence for a coherent research framework of the thesis.

The chapters of the thesis can be excerpt from the papers/publications or conference abstracts and this has to be declared, see https://www.ethz.ch/students/en/doctorate/doctoral-thesis-examination.html. The citation of
published articles has to follow the guidelines of ETH Citation etiquette
printed, the author/doctoral student must clarify to the relevant publisher about the options for reuse that have
been granted and the terms. These are part of the publication contract and may also be found in the so-called
Sherpa-Romeo list.

The copyright to a doctoral thesis belongs solely to the author/doctoral student (Art. 34 Regulations for Doctoral
Studies ETH Zurich). In the case of more than one author, all the co-authors must also agree to the further
distribution.

8. Examination committee (Art. 26 of the Ordinance)

The chairperson of the examination committee is assigned by the Deputy Head of the Department, who acts as
the Delegate of Doctoral Affairs, on behalf of the Department Head.
The potential chairperson is sought by the Doctoral Administration according to the following order of priorities:

i. the Delegate of Doctoral Affairs;
ii. a delegate member of previous Department Boards;
iii. or, as an exception, a full professor of D-MAVT.

All members of the examination committee are required to attend the examination either in person or via
videoconference (according to Art. 2 of the Directive: Physical presence of the examination committee at
doctoral examinations: “The minimum number of persons from the examination committee obliged to be
physically present at a doctoral examination are: the chairperson, the thesis supervisor and at least one of the
co-examiners”).

9. Doctoral examination (Art. 27 of the Ordinance)

9.1 Organization of the examination

The Doctoral Administration sets the doctoral examination after receiving a written request (or via e-mail) from
the supervisor regarding potential dates.

The Doctoral Administration informs the candidate, the supervisor, the chairperson and the co-examiners of the
date, time, chairperson and room as well as of deadlines for delivery of the documents.

The invitation to the doctoral examination is sent to D-MAVT employees at least 10 days before the set date
and provides information on the time, place, subject of the thesis, supervisor and co-examiners.

9.2 Examination

D-MAVT doctoral examinations are public. Audio or video recording is prohibited.

The language of the doctoral examination may be English or German (in the latter case the chairperson must be
informed).

D-MAVT doctoral examinations may last 90 minutes. The candidate’s presentation should be 30 - 40 minutes,
with the remaining time available for questions and discussion.

10. Doctoral thesis assessment and oral examination (Art. 28 of the Ordinance)

The candidate sends the final version of his/her thesis to all co-examiners after approval by the supervisor, but
no later than six weeks prior to the exam.
The examiner and every co-examiner prepare a written report on the doctoral thesis, in English or German, and send the signed report both as an electronic PDF and as a hard copy to the Doctoral Administration at least 3 weeks prior to the examination. The reports on the thesis are confidential, however are available to D-MAVT faculty members.

The assessment must contain the following elements (there is no template or special form):

I. short summary of the thesis;
II. assessment of the value of the scientific work and the thesis quality (grades are not requested);
III. recommendation regarding acceptance of the thesis.

The examination committee gives both the doctoral thesis and the oral examination the mark of pass or fail, and submits a report, signed by the chairperson, to the Doctoral Administration.

In the report, the examination committee provides the reasons for a failure or for required revisions. If members of the examination committee disagree with the decision, the chairperson tries to mediate an unanimous consensus. If no consensus can be found, a vote is requested, with the chairperson casting the deciding vote. The result of the vote must be included in the report.

To promote award nominations, the examination committee considers the qualifications of each candidate with respect to a potential nomination for an outstanding thesis award (ETH Medal or industrial awards). If the candidate is considered for nomination, the committee documents the reasons for nomination by filling in a separate form. The decision of the committee is confidential within the examination committee and later in the award committees. The supervisor is responsible for deciding on the nomination and for preparing the nomination documents.

If the doctoral thesis requires minor revisions, as prescribed in the report of the examination committee, the candidate must revise the thesis and re-submit it to the responsible persons. The supervisor must check and approve the minor revisions to the doctoral thesis and then inform the Doctoral Administration in writing at least one week prior to the Department Conference for which acceptance of the thesis is scheduled. The conferral of the doctorate is then included in the list of conferred doctoral degrees for the Department Conference.

11. Retakes (Art. 29 of Ordinance)

A doctoral candidate who fails the doctoral examination, or whose doctoral thesis is rejected, may retake the doctoral examination or revise the thesis once within a six-month period following the doctoral examination.

There are two potential scenarios:

a) Failure with no appeal

The chairperson of the examination committee informs the doctoral candidate in writing via the Doctoral Administration about failing the doctoral examination or doctoral thesis.

The candidate submits a written agreement to the decision and does not request a written decision subject to appeal: he/she retakes the exam or revises the thesis within 6 months of the doctoral examination. The Department Conference will not be informed.

In the case that only the thesis is subject to revision, the candidate receives the information about the deadline for the revision and the content of the revision requested. This deadline may not be later than 6 months after the examination. The candidate must revise the doctoral thesis within the given deadline and re-submit it to the supervisor and the examination committee. The candidate is not required to repeat the oral examination.

After approval by the examination committee, which requires written consent of all committee members and an update of the evaluation reports, the conferral of the doctorate is then included in the list of conferred doctoral degrees at the next Department Conference.
b) Failure with appeal

The chairperson of the examination committee informs the Doctoral Administration in writing about failing the doctoral examination or doctoral thesis.

The candidate does not accept the decision and plans to appeal.

In this case, the Department Conference is asked to submit a decision in writing on reasons for failing the examination or the thesis and for withholding the doctoral degree.

After receiving this decision, the Doctoral Administration provides a decision subject to appeal and defines the next steps.

12. Conferral of the doctoral degree (Art. 30 of the Ordinance)

The Doctoral Administration prepares the list of candidates set to receive the doctoral degree, as well as a list of those candidates not recommended for conferral. The list is drawn up on the basis of the examination committees’ reports and the additional approval requested for minor revisions.

The Doctoral Administration includes the list of candidates as an attachment to the invitation to the Department Conference, which is distributed one week prior to the Department Conference.

On the basis of the examination committees’ reports, available to the members of the Department Conference during the meeting, the Department Conference decides whether to award or withhold the doctoral degree. In case of discrepancies between the decision of the examination committee and the Department Conference, a working group is formed.

Following the decision by the Department Conference, the Doctoral Administration sends the original documents to the Rectorate.

13. Nomination for ETH awards and industrial awards

The doctoral committee is responsible for selecting award nominees for the ETH Medal and for industrial awards (ABB Forschungspreis and HILTI). The Head of the doctoral committee ensures that all excellent candidates are considered as award applicants (form/remarks to be filled in at the time of the doctoral examination).

13.1 D-MAVT nomination procedures

The nomination procedures take place as follows:

a) nomination window: doctoral candidates are eligible for a nomination if they finish and pass the doctoral examination (date of exam) before the end of the spring semester (according to the official semester dates of the academic calendar of ETH Zurich) of the respective year of nomination. Accordingly, the nomination window is defined from the first day after the spring semester of the previous year until the last day of the spring semester of the year of nomination.

b) the nomination must be submitted by the supervisor no later than 31 July of the year of nomination. There is a general agreement that every group nominates the best 20% of their doctoral candidates per year on a long-term average.

c) the nominations are evaluated and ranked by the doctoral committee in September each year.

d) according to the number of available awards, which is determined by the Rectorate, the doctoral committee identifies the D-MAVT proposal for award nominations based on their evaluation and submits these nominations to the Professors’ Conference for vote and approval.

e) the Doctoral Administration submits the approved nominations to the Rectorate for acceptance and a final decision.
13.2 Nominee selection criteria and rules

The following criteria and rules apply when selecting nominees:

a) focus on implicit criteria (excellent quality, scientific and/or industrial relevance/impact) and explicit criteria (number of publications, patents, duration, recommendation of the exam chairperson approved by all examiners, etc.);

b) before the doctoral committee meeting, each committee member ranks all proposals from 6 (most favored) to 1 (least favored) (whole numbers only). The same grade may be allocated to more than one candidate, but, it is requested that the full range of grades be used, i.e. that at least one 6 for the relative best and one 1 for the relative weakest is allocated;

c) committee members abstain from grading their own/supervised candidates;

d) the scores are averaged to create an anonymous ranking. This ranking serves as the basis for further discussions and for the final decision in the award selection meeting;

e) members with conflicts of interest (member is supervisor of the candidate) leave the room during the detailed discussion of the candidates.

f) The nominees for ETH awards and industrial awards are discussed at the same time.

13.3 Material to submit for award nomination

The following documents must be submitted with award nominations:

1) supervisor’s recommendation letter, with statement of outstanding achievement, addressed to the doctoral committee (provided by the supervisor);

2) statement of the chairperson of the examination committee, approved by all examiners (choosing among the best 10 – 20% of that year). The statement is included in the report from the doctoral examination (provided by the Doctoral Administration);

3) standard announcement of the doctoral examination (provided by the Doctoral Administration);

4) referee’s and co-examiner’s evaluation report on the doctoral thesis (provided by the Doctoral Administration);

5) copy of the doctoral thesis or link to ETH e-library (provided by the supervisor);

6) curriculum vitae of the nominee (provided by the supervisor);

7) list of publications (distinguishing between accepted and submitted publications, provided by the supervisor);

8) list of posters, lectures and other scientific contributions, patents and contributions relevant to industry (provided by the supervisor);

9) duration of doctoral studies and current occupation (provided by the supervisor);

10) one additional supporting letter (with original signature) from a referee outside ETH Zurich who has NOT participated in the doctoral examination (provided by the supervisor);

11) in the case of nomination for industrial awards, the supervisor will be asked to provide any additional documentation.