

Department of Civil, Environmental and Geomatic Engineering (D-BAUG)
Detailed stipulations regarding the doctorate

of 27 January 2022

This English translation serves information purposes only and has no legal force. The original German version is the legally binding document.

The Executive Board of ETH Zurich

at the request of the Department of Civil, Environmental and Geomatic Engineering at ETH Zurich¹ and pursuant to Art. 52 of the ETH Zurich Ordinance on the Doctorate of 23 November 2021²,

hereby decrees the following detailed stipulations regarding the doctorate:

Section 1: General provisions

Art. 1 Scope and purpose

¹ These detailed stipulations set out the department-specific provisions governing the doctorate at the ETH Zurich Department of Civil, Environmental and Geomatic Engineering (D-BAUG). They are based upon the provisions of the ETH Zurich Ordinance on the Doctorate of 23 November 2021³ and the Rector's Implementation Provisions for the ETH Zurich Ordinance on the Doctorate of 23 November 2021⁴.

² The following provisions extend the superordinate documents with respect to quality assurance of doctoral theses at D-BAUG.

Art. 2 Doctoral committee

The doctoral committee is composed of the following persons:

- a. the Head of Department or another member of D-BAUG department management as chairperson
- b. the Directors of Study or their deputies

¹ Resolution of the D-BAUG Department Conference of 15 December 2021 (approval of the detailed stipulations)

² SR 414.133.1

³ SR 414.133.1

⁴ RSETHZ 340.311

Art. 3 Head of the D-BAUG doctoral committee

The chairperson of the doctoral committee is also the head of the D-BAUG doctoral committee.

Section 2: Recruiting and admission to the doctorate

Art. 4 Doctoral programmes

Doctoral students who are admitted on the recommendation of an ETH doctoral programme will be admitted to the doctorate at D-BAUG provided that they fulfil D-BAUG admissions criteria.

Art. 5 Doctoral plan

¹ The doctoral plan must be submitted to the aptitude committee four weeks before the aptitude colloquium takes place. The formal instructions on submitting the doctoral plan published on the D-BAUG Doctorate website must be followed; a doctoral plan template is also available there.

² Before the aptitude colloquium the chairperson of the aptitude committee must check that the minimum requirements listed in Art. 11 of the Ordinance on the Doctorate have been satisfied.

Art. 6 Aptitude committee

The aptitude committee is composed of the following persons:

- a. a member of the doctoral committee or someone named by the doctoral committee as chairperson; this person must be a member of the D-BAUG Professors' Conference
- b. the doctoral thesis supervisor and the second advisor
- c. an independent additional member; this additional member must be a university professor working outside ETH Zurich who is not a co-author involved in the doctoral project and is not a participant in the doctoral research project

Section 3: Supervision of the doctorate

Art. 7 Second advisor

The following persons may act as second advisors:

- a. university professors
- b. Senior Scientists
- c. persons who are scientifically qualified in the respective field (with the exception of post-docs)
- d. proven experts in the respective field (e.g., from industry)

Art. 8 Permission for adjunct professors and *PrivatdozentInnen* to act as doctoral thesis supervisors

Adjunct professors and *PrivatdozentInnen* who are employed by D-BAUG are permitted to supervise doctoral theses.

Art. 9 Progress report and status conversation

In addition to the doctoral thesis supervisor, the second advisor takes part in the first part of the status conversation, on scientific progress.

Section 4: Doctoral thesis and doctoral examination

Art. 10 Cumulative doctoral theses

¹ Doctoral theses may be composed as «cumulative doctoral theses». They must contain an appropriate framework text, an introduction and a summary. They must also involve at least three publications. The formal specifications provided on the D-BAUG Doctorate website must be met.

² The following points also apply:

- a. Two peer-reviewed publications must have been published or accepted for publication by an SCI-listed journal or a journal of comparable level. A third must at least have been submitted. However, three publications do not automatically lead to awarding of the doctorate.
- b. The doctoral student must be the lead author of the publications.
- c. Among the three (or more) publications, only one with several lead authors can be accepted. The stipulations set out in item 11.2 of the Rector's Implementation Provisions for the ETH Zurich Ordinance on the Doctorate must be adhered to.

Art. 11 Communication regarding and approval of co-examiners

¹ At the request of the doctoral thesis supervisor, the doctoral committee approves co-examiners and communicates their names to Academic Services for the attention of the Vice Rector for Doctoral Studies. The request must be made four months before the doctoral examination at the latest. The online form on the D-BAUG Doctorate website must be used for the request; the specifications there regarding co-examiners must also be met.

² At D-BAUG at least two of the co-examiners must be independent and come from outside ETH Zurich. This means that they may not be co-authors or be involved in any way in the doctoral thesis project. The stipulations set out in item 11.3 (c) of the Rector's Implementation Provisions for the ETH Zurich Ordinance on the Doctorate also apply.

Art. 12 Doctoral examination procedure: Submission of an examination copy of the thesis; receipt of thesis reports

¹ Registration for the doctoral examination is subject to the specifications set out in Art. 39 of the ETH Zurich Ordinance on the Doctorate and item 11.4 of the Rector's Implementation Provisions for the ETH Zurich Ordinance on the Doctorate. Registration proceeds via Doctoral Administration (Academic Services) and must take place 15 working days before the doctoral examination at the latest.

² Doctoral candidates must hand in the examination copy to the D-BAUG Study Administration Office eight weeks before the examination date at the latest. They must also confirm their independent authorship of the thesis in a separate declaration (according to the specifications provided on the D-BAUG Doctorate website (FAQ)).

³ The examination committee's reports on the thesis must reach the department ten working days before the examination date at the latest.

⁴ The examination date will only be confirmed when all reports have been received.

⁵ The doctoral thesis supervisor and the co-examiners have no right to view the reports before the doctoral examination.

Art. 13 Doctoral examination with talk

¹ The examination chairperson is a member of the doctoral committee, i.e., a Director of Studies, the Head of Department or the respective delegate.

² The following persons take part in the doctoral examination:

- a. the doctoral student
- b. at least the following members of the examination committee (cf. Art. 40 of the ETH Zurich Ordinance on the Doctorate): the chairperson; the doctoral thesis supervisor as examiner; at least one co-examiner. If there is any relationship of dependence between the thesis supervisor and the co-examiners, a further independent expert must also be present.

³ According to item 11.6 of the Rector's Implementation Provisions for the ETH Zurich Ordinance on the Doctorate, the physical presence of the examination committee and the doctoral student is not compulsory. The participants may attend via video link.

⁴ The doctoral examination is partially public.

⁵ Sequence and duration of the doctoral examination:

- a. a public presentation on the doctoral thesis topic by the doctoral student, lasting a maximum of 30 minutes
- b. a short, general question session following the talk (ten minutes maximum). This question session is public (the answers are not assessed)
- c. the question session is followed by the non-public part of the doctoral examination, which addresses the doctoral thesis topic(s). This part is only open to members of the examination committee and the Department Conference (duration: at least 60 minutes).

Art. 14 Publication

Doctoral students who conducted their research work outside ETH are required to state in any respective publications that they were awarded the doctorate by ETH Zurich.

Section 5: Procedure if doctoral thesis supervisors retire or leave the university

Art. 15

¹ If the retirement discussion between the President of ETH Zurich and the doctoral thesis supervisor did not take place within the two years previous to retirement, the Head of Department will step in. The Head will ensure that ETH specifications regarding funding, the necessary infrastructure and the employment relationship of the respective doctoral student have been met in a binding manner.

² If the doctorate is still to be pursued at D-BAUG, the respective co-examiners must be approved six months at the latest before the doctoral thesis supervisor retires or leaves the university.

Section 6: Final clauses

Art. 16 Transitional provisions

¹ Doctoral students who were provisionally – but not yet definitively – admitted before 1 January 2022 are also subject to the extended stipulations regarding the research plan set out in Appendix 1 (see Art. 60 of the ETH Zurich Ordinance on the Doctorate).

² Doctoral examinations conducted before 1 January 2024 are subject to the stipulations on co-examiners set out in Appendix 1 (see Art. 66 of the ETH Zurich Ordinance on the Doctorate).

³ Doctoral students who (in accordance with Art. 65 of the ETH Zurich Ordinance on the Doctorate) choose to pursue their regular doctoral studies according to previous regulations are subject to the stipulations set out in Appendix 2.

Art. 17 Entry into force

These detailed stipulations enter into force retroactively on 1 January 2022. They replace the D-BAUG stipulations on individual doctoral studies of 9 December 2015.

Application of salary rates

Salary rates for doctoral students are governed by the stipulations set out in Art. 8, Para. 3 of the Ordinance Governing Scientific Employees of ETH Zurich⁵, in association with Section 1 Para. 3 of the Directives for Doctoral Students Employed at ETH Zurich⁶.

The document «Guideline for the employment of doctoral students» currently valid at D-BAUG is provided in Appendix 3.

⁵ SR 172.220.113.11

⁶ RSETHZ 622



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



Department of Civil, Environmental and Geomatic Engineering (D-BAUG)

Additional Provisions (re-issued) to the Ordinance on Doctoral Studies (ODS)¹ and the Rector's Implementation Provisions for the Ordinance on Doctoral Studies (RIPO)²

of: 01. September 2011 (version of: 09.12.2015)

The English text serves as a mere translation and has no legal force.
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in effect as of 01 July 2016

The Department D-BAUG issues the following Additional Provisions³ on a Doctorate:

1. Objectives (ODS Art. 1 to 3 and RIPO 1.)

The following provisions set forth standardised requirements on doctorates in order to ensure high-quality doctoral theses.

2. Additional Admission Requirements (ODS Art. 10 and RIPO 3.)

- 2.1 Qualifying exams need to be on Master's degree level and may not be administered by the thesis supervisor or a representative of his/her professorship alone.

3. Research Plan (ODS Art. 12 and RIPO 4.)

- 3.1 Within 12 months after provisional admission, the Research Plan must be submitted, along with the form "Approval of the Research Plan", duly signed by the doctoral thesis supervisor (confirms definitive admission to doctorate). Submission to Doctoral Administration Office D-BAUG, attention Doctoral Committee.

3.2 Content and Captions of Research Plan

- cover sheet with name of doctoral student and thesis supervisor as well as title of thesis
- abstract, ½ page max.
- thesis objectives, i.e. research question (research gap)
- state of the art of current research and relation to ongoing research at institute or department
- detailed research plan (methodology, experimental approach, type and nature of results)
- relevance to science and economy
- time schedule

¹ SR 414.133.1

² RSETHZ 340.311

³ These Additional Provisions were discussed and approved by: PK 25.11.2010, DK 15.12.2010, Datum Genehmigung Rektorin 11.01.2011, Datum PK 13.11.2015, DK 09.12.2015.

- expected publications (excluding monograph and cumulative thesis)
- activities beyond doctoral thesis work (teaching responsibilities, projects, laboratory work)
- mention of expected type of thesis (monograph or cumulative doctoral thesis)
- confirmation of research plan presentation to expert committee (incl. name list and addresses). Co-examiners are allowed to be expert committee members (optional though).
- signature of thesis supervisor, principal investigator, co-examiners (if known yet), and doctoral student
- bibliography

3.3. Total length of research plan: 4-8 pages

4. Co-examiners (ODS Art 15 and RIPO 6, ODS Art 38c), incl. Rectorate's Directive "Physical Presence of the Examination Committee at Doctoral Examinations", Appendix 3 of Glossary of RIPO

4.1 Upon request by the thesis supervisor, the Doctoral Committee appoints co-examiners and informs the Rectorate accordingly. The first co-examiner may be appointed upon submission of the research plan, but no later than 3 years after provisional admission.

4.2 A minimum of two co-examiners must be appointed, of which

a) one must be an active University professor outside ETH and

b) a second one must be a University professor (external or internal) or a scientifically qualified person in the relevant field of research or an established expert from the practical sphere, e.g. from industry

c) at least person a) or b) must be completely independent (e.g. no co-authorship with the doctoral student and/or no involvement in the project.)

Note: Pursuant to the Directive „Physical Presence of the Examination Committee at Doctoral Examinations", Article 2, (minimum number of committee members) at least one co-examiner must be physically present during the doctoral examination.

4.3 Emeritus professors may be appointed as co-examiners up to one year after their retirement. This temporal limitation does not apply to a former thesis supervisor after his/her retirement. He/she may act as co-examiner for a doctoral thesis previously supervised.

4.4 Content of requests:

- name of the doctoral student
- title of the thesis
- for co-examiners outside ETH: CV or brief statement why person suggested is suitable as co-examiner
- date and signature of the thesis supervisor



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- 4.5 Requests for the appointment of co-examiners need to be submitted via mail or email to the Doctoral Administration D-BAUG, P.O. Box, 8093 Zurich, for the attention of the Doctoral Committee of D-BAUG.

5. Personal Contribution

The doctoral student must formulate a separate declaration of his/her personal scientific contributions to the monograph or the publications that account for a cumulative thesis (brief description of intellectual contribution). This separate declaration needs to be submitted to the Doctoral Administration D-BAUG, together with the exam copy of the doctoral thesis (see Additional Provisions, Section 7.1, hereunder).

6. Cumulative Doctoral Thesis (ODS Art. 26 to 29 and RIPO 10.b)

- 6.1 Doctoral theses may also be compiled as a cumulative thesis (comprising a framework text plus three publications). Corrigenda, after meeting of Doctoral Committee, 14.09.16:
SCI Journal (formerly ISI)
- 6.2 It is recommended that two publications have been accepted or published in a peer-reviewed journal (ISI or comparable level). A third publication should at least have been submitted to such a type of journal. Note: Three publications do not automatically imply that a doctorate can be completed.
- 6.3 The doctoral students must be 1st author of all publications.
- 6.4 The cumulative doctoral thesis must include a substantial framework text, comprising the following elements:
- Overarching introduction into the motivation and the topic of the doctoral thesis
- Elaboration on the (primary) theoretical bases and the methodology used
 - Relevance of the thesis to science and society
 - General conclusion and outlook on future research and development in the field
 - Summary of publications

7. Doctoral Examination (ODS Art. 26 to 29 and RIPO 10.)

- 7.1 The Doctoral Administration D-BAUG will send out a request for the written reports to the thesis supervisor and all co-examiners on the strict condition that the exam version of the doctoral thesis has been submitted electronically (generally as a pdf) to the Doctoral Administration D-BAUG no later than 6 weeks prior to the exam date.
In addition, the doctoral student must confirm that the pdf exam version is identical with the paper copy he/she uses to register for the examination at the Doctoral Administration of the Rectorate, ETH Centre, no later than 12 working days prior to the exam date.
- 7.2 The examination date will be confirmed once all reports have been submitted (by the thesis supervisor as well as by the co-examiners). A period of at least 12 working days between submission and examination day must be observed. Thesis supervisor and co-examiners cannot have insight into the reports prior to the examination day.
- 7.3 A member of the Doctoral Committee (Director of Studies or Department Head) is to chair a doctoral examination.



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- 7.4 The doctoral examination is semi-public. The exam result is communicated within 2 days.
Procedure and Duration of the Doctoral Examination (1 hour minimum):
- Public oral presentation of the thesis by the doctoral student: 30 minutes maximum.
 - Thereafter: Short, general Q&A session (approx. 5-10 minutes). This Q&A session is public. (However, answers given are not included in the assessment.)
 - Following the public Q&A is a non-public part, only open to the Examination Committee and members of the Department Conference. (Duration: 30 minutes minimum.)
8. **Procedure in case of Retirement and Resignation of a Thesis Supervisor, i.e. Professor Emeritus (ODS Art. 6 and 15 as well as RIPO 6.)**
- 8.1 In the event that the retirement of a professor has not been addressed by the President two years prior (“Emeritierungsgespräch”), the Department Head should take up initiatives to ensure that ETH guidelines on financing, infrastructure and employment be adhered to.
- 8.2 No later than 6 months prior to retirement or resignation of a thesis supervisor must employment and remuneration of a doctoral student be settled and co-examiners appointed.
9. **ETH-external doctoral students (ODS Art. 16 and RIPO 7.)**
- ETH-external doctoral students are obligated to list ETH in their published works.
10. **Transitional Provisions**
- Doctoral students matriculated before the implementation of these Additional Provisions are subjected to the following transitional provisions:
- instead of 3.2. “Research Plan”, previous provision on “Research Plan” 3.2 of Additional Provisions of 01.01.2011 (complemented 01.11.2013)
 - instead of 4.2. “Co-Examiners”, previous provision on “Co-Examiners” 4.2. of Additional Provisions of 01.01.2011 (complemented 01.11.2013)
 - instead of 6.2 “Cumulative Doctoral Thesis”, previous provision on “Paper Dissertations” 5.3 of Additional Provisions of 01.01.2011 (complemented 01.11.2013)



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Department of Civil, Environmental and Geomatic Engineering (D-BAUG) Detailed Provisions for Individual Doctoral Studies

9 December 2015 (per 1 July 2016)

The English text serves as a mere translation and has no legal force.
The original German text is the legally binding document.

Approved by the Executive Board on 12 April 2016¹

The D-BAUG

on the basis of Art. 23, Para. 3 of the Ordinance on Doctoral Studies ETH Zurich, 1 July 2008, and in conjunction with Section 9 of the Rector's Implementation Provisions for the Ordinance on Doctoral Studies of 17 October 2013²

issues the following Detailed Provisions³ for individual doctoral studies

- Art. 1 Doctoral students discuss their individual study programme with their thesis supervisor.
- Art. 2 Admittance to the doctoral examination is granted if the study performance accounts for at least 12 credits, whereby 1 credit must correspond to a workload of 25–30 hours. Credits for lectures listed in the course catalogue are only granted if the study performance was completed successfully.
- Art. 3 At least one third of the credit point requirement must be collected outside the doctoral student's field of research.
- Art. 4 Educational events outside the course catalogue of ETH and the University of Zurich (UZH) are assessed as follows:

seminars and doctoral colloquia	4 credits max.
teacher's training, language and management courses, personal development courses, mentoring programmes for doctoral students	4 credits max.
summer schools	4 credits max.
active contribution to ETH work groups and committees	4 credits max.

¹ SR 414.133.1

² RSETHZ 340.311

³ These Detailed Provisions were discussed and approved by PK 13.11.2015 and DK 09.12.2015.

- Art. 5 Credits not counted towards doctoral studies:
- study performance in conjunction with additional requirements for the doctorate
 - study performance during Bachelor or Master studies
- Art. 6 The Doctoral Committee decides on the accreditation of study performance outside the course catalogue of ETH and the University of Zurich upon request by the thesis supervisor.
- Art. 7 In the event that a doctoral thesis is conducted outside the ETH domain, the Doctoral Committee decides on the requirements for doctoral studies upon request by the thesis supervisor.
- Art. 8 Credit points accumulated during doctoral studies are verified by the Doctoral Administration D-BAUG, i.e. confirmed on the form „Registration for Doctoral Examination”.
- Art. 9 The Doctoral Committee shall decide on exemptions to these Detailed Provisions.
- Art. 10 Doctoral students who commenced their doctorate prior to 1 July 2016 will be treated under the Detailed Provisions of 1 September 2009.
- Art. 11 These Detailed Provisions come into effect on 1 July 2016 and apply to all doctoral students who start their doctorate as of 1 July 2016.



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Guideline for the employment of doctoral students

September 27, 2017

Presented at the D-BAUG Department Conference (DK) HS17 I on October 4, 2017

The D-BAUG recommends for the employment of doctoral students:

1. Objective

According to art. 10 par. 1 of the „Verordnung über das wiss. Personal der ETH Zürich“, doctoral students dedicate a minimum of 70% of their working time to their doctorate (“protected-time”), i.e. the dissertation, the underlying research project and their doctoral studies. Within the remaining maximum 30% of their working time they can have additional duties besides their doctorate (e.g. teaching, general services, administration, infrastructure tasks and contract or commissioned research). The additional effort for these duties besides the doctorate is compensated with a higher salary rate.

The present guideline aims for transparency and a harmonization of the employment conditions of doctoral students within the different professorships and institutes at D-BAUG. The guideline thereby accounts for different employment modalities due to the different funding of the individual professorships and institutes.

2. Classification of the salary rates

The following table lists the recommended extent of additional duties besides the doctorate for each salary rate. The listed values correspond to a linear distribution of the possible 30% of additional duties. A smaller extent of duties for each salary rate is also possible. A value of 20% corresponds to 1 work day per week.

Salary rate	% of the annual working time
5	max. 30%
4	≈ 24%
3	≈ 18%
2	≈ 12%
1 ¹	≈ 6%

If necessary, the salary rate may be changed during the duration of the doctorate. Tracking of the working time is the responsibility of both, doctoral students and their supervisors. It is recommended to count the personal continuing education as part of the doctoral studies.

¹ Corresponding to salary rate „standard“ of the „VO wiss. Personal der ETH Zürich“ (SR 172.220.113.11)

3. General

To allow a transparent assignment of the salary rates of doctoral students within the ETH salary rate system, the following contents should already be discussed during the application interview:

- „VO über das wiss. Personal der ETH Zürich“ including the salary rate system for doctoral students at ETH (SR 172.220.113.11),
- the present D-BAUG guideline for the employment of doctoral students,
- a detailed job description (including the type and extent of additional duties besides the doctorate), and
- the planned duration of the doctorate, including potential possibilities for an extension of this duration.

According to art. 7 of the “Personalverordnung ETH-Bereich” (SR 172.220.113) the supervisors have an appraisal talk with their employees at least once per year. Such an appraisal or development talk can be used to discuss potential employment contract adaptations, especially concerning the extent of additional duties besides the doctorate, the corresponding salary rate, or the job description. In addition to the topics listed in the official ETH-form, it is recommended to also include the future career development of the doctoral students.