

Department of Informatics of the Faculty of Economics, Business Administration  
and Information Technology of the University of Zurich

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## Doctoral regulations

for the Doctorate in informatics  
at the Faculty of Economics, Business  
Administration and Information Technology  
of the University of Zurich

Version 1.2 as decided at the meeting of the Faculty Assembly on 28 September 2016

These Doctoral regulations are based on the ordinance for obtaining a Doctoral degree (PVO<sup>1</sup>) in informatics at the Faculty of Economics, Business Administration and Information Technology of the University of Zurich of 20 August 2008. All references to paragraphs of the PVO refer to this document. The department designation refers to the informatics department of the Faculty of Economics, Business Administration and Information Technology of the University of Zurich.

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<sup>1</sup> Ordinance for obtaining a Doctoral degree (EN) = Promotionsverordnung (DE), abbr. PVO

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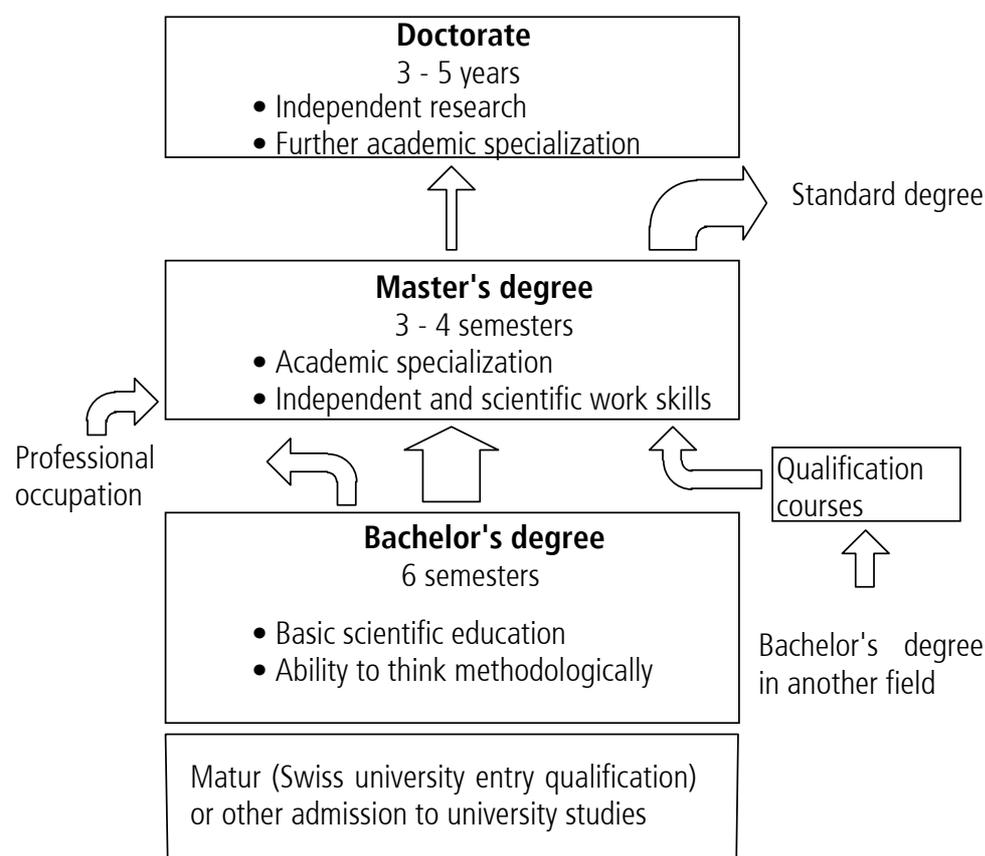
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## 1 Purpose of the Doctoral regulations

The Doctoral regulations contain the execution provisions for the Doctorate in informatics at the Faculty of Economics, Business Administration and Information Technology of the University of Zurich, the modalities of the examinations and the dissertation, and the awarding of ECTS credits.

## 2 Objectives and structure of the Doctorate

The Doctorate is the third level of a three-level university education (Figure 1). In the Doctorate, students deepen the knowledge acquired in the Bachelor's and Master's programs. The Doctorate serves the acquisition of skills for pursuing scientific activities in informatics and their applications. It qualifies the graduate to pursue academic activities in the areas of research and teaching as well as a highly qualified occupation in the private sector (§ 2 PVO).



**Figure 1.** The three-level system of university education

The Doctorate consists of a *two-level Doctoral program* as well as the preparation of a *dissertation*. The Doctoral program is divided into a Master's level and a Doctoral level. Students holding a Master's degree (or equivalent) who were admitted without conditions (§ 8 PVO) enter the Doctoral level directly

and are enrolled as Doctoral students. All others initially enter the Master's level and are enrolled as Master's students (§ 6 PVO).

The dissertation can only be started after entering the Doctoral level (§ 6 PVO).

As a rule, the Doctorate takes 3 to 5 years once entering the Doctoral level, but must be completed within a maximum of 6 years (§ 7 PVO).

## **3 Admission**

### **3.1 General provisions**

The principles of admission are regulated in §§ 8 - 11 PVO.

### **3.2 Application and admission procedure**

Application for admission is made in writing to the Doctoral Committee in accordance with §§ 8 - 12 PVO.

All admissions applications are considered by the Doctoral Committee. The Committee may require additional documents and proof as necessary, and may define additional requirements and conditions under § 10 PVO.

The admission decision is communicated to the applicant in writing. Objections must be submitted in writing to the Doctoral Committee within 30 days. The decision of the Doctoral Committee may be appealed to the Appeals Committee of the Cantonal Institutes of Higher Learning in Zurich.<sup>2</sup>

A processing fee of CHF 200.00 is levied for each application. Applicants who are admitted and enter the Doctoral program may request a cash refund of the processing fee from the Dean's Office in the first semester of their Doctoral studies.

In addition to admission, matriculation must be requested through the Student Administration Office of the University of Zurich. Deadlines and formalities are published in a suitable form.

### **3.3 Documents**

The university and the department publish in a suitable form what documents must be included with the application.

If documents are missing, the university may levy an additional processing fee of CHF 50.00 or reject the application.

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<sup>2</sup> Be aware that the legal documents have to be in German.

### **3.4 Admission with additional requirements or conditions**

If the admission is granted subject to additional requirements or if conditions must be met before admission, they are communicated with the admission decision. It specifies the additional required coursework and the deadlines, and determines the permissible number of failed attempts.

The modules to be completed as part of additional requirements (= earning of additional qualifications) must be successfully completed within six consecutive semesters after admission is granted and before submitting the thesis proposal.

The reference date is the admission with additional requirements. Documentation must be provided when registering for graduation. The credits earned in this process cannot be credited towards the Doctoral degree.

The modules to be completed as part of the conditions (= earning of additional qualifications) must be completed as part of the Master's level of the Doctoral program. They must be successfully completed within six consecutive semesters. The reference date is the decision on the conditions. Once the conditions have been successfully completed within this period, the candidate enters the Doctoral level. The credits earned as part of conditions cannot be credited towards the Doctoral degree.

In justified cases, the Doctoral Committee may extend the deadline for the fulfillment of additional requirements or conditions.

### **3.5 Recognition and transfer of external credits**

The provisions under § 10 as well as §§ 29 - 30 PVO apply to the recognition or transfer of external credits.

For coursework completed at another institute of higher education or in another degree program, the candidate may direct a written petition (with the corresponding transcripts of records) to the Doctoral Committee.

It should be noted in particular that modules with similar course content are not credited more than once. The burden of proof lies with the candidate. The student is also responsible for ensuring that the credits for the coursework to be transferred correspond categorically to the European Credit Transfer System (ECTS).

The above regulations also apply to candidates who want to transfer to the informatics department from another university, another faculty or another department.

Dissertations completed at other institutions cannot be recognized or transferred.

## **4 Supervisor and co-supervisor**

The provisions of § 13 PVO apply for the supervisor.

The candidate is obligated to discuss his or her plans and progress in the Doctoral program with his or her supervisor at least once each semester.

The Doctoral Committee will appoint at least one person with appropriate qualifications as a co-supervisor of the dissertation no later than when the dissertation is submitted. The supervisor will propose one or more suitable persons to the Doctoral Committee in coordination with the Doctoral student. They need not belong to the department; the Doctoral Committee may also appoint as co-supervisors persons from the international academic community with appropriate qualifications.

Professors emeriti of the department may act as supervisors for Doctoral students if the dissertations are defended no later than three years after the professor's retirement. The reference date is the date of retirement.

## 5 The Master's level of the Doctoral program

### 5.1 Students holding a Master's degree admitted without conditions

Students holding a Master's degree or an equivalent degree who have been admitted without conditions skip this level and enter the Doctoral level directly.

### 5.2 Students holding a Master's degree admitted with conditions

Students holding a Master's degree (or equivalent) but who have been admitted with conditions fulfill the conditions imposed at the Master's level.

Once they have fulfilled all conditions specified in the admission decision within the given time (see Section 3.4), they transfer to the Doctoral level. Otherwise, the Doctoral Committee may revoke admission (§ 16 Para. 1 and § 10 PVO).

### 5.3 Students with a Bachelor's degree

Students admitted with a Bachelor's degree under § 8 Para. 2 PVO complete the Master's level modules specified in the program regulations for the Master of Science in informatics.

#### 5.3.1 Curricular content

Of the minimum of 90 ECTS credits to be earned at the Master's level in accordance with § 16, Para. 2, Lit. a PVO, at least 10 ECTS credits must be completed from the Doctoral level as part of the INF elective area in accordance with Table 1. The minimum number of credits at the Doctoral level of the Doctoral program is then reduced by this number of credits (see Section 6).

**Table 1.** Credits from the Doctoral level to be acquired at the Master's level

Modules	ECTS credits
Doctoral courses, Doctoral seminars, summer schools, Doctoral symposia	3
Research Methods	3

Research colloquia (0.5 credits per semester)	1
Didactics and Scientific Communication	3
<b>Total (excl. dissertation)</b>	<b>10</b>

Another 9 credits from the Doctoral level – as described in Table 2 – can be credited towards the INF elective area without the minimum number of credits at the Doctoral level of the Doctoral program being reduced (see Section 6).

**Table 2.** Additional credits from the Doctoral level that can be credited towards the Master's level

<b>Modules</b>	<b>ECTS credits</b>
Research Methods	3
Didactics and Scientific Communication	3
Research practice: Writing a scholarly paper ready for publication	3
<b>Total (excl. dissertation)</b>	<b>9</b>

### 5.3.2 *Thesis proposal and paper*

At the Master's level, the candidate drafts a thesis proposal in coordination with his or her mentor and defends it in accordance with Section 8.2 and writes a scholarly paper ready for publication.

### 5.3.3 *Graduation*

Once the candidate has earned at least 90 ECTS credits towards the degree at the Master's level and the thesis proposal and paper have been accepted by the Doctoral Committee in accordance with Section 5.3.2, he or she may register for graduation from the Master's studies.

Only credits that have been earned within the five years prior to registration for the final degree can be credited toward the degree. The reference dates are, on the one hand, the day of registration for graduation and, on the other hand, the last day of the semester in which a credit was earned.

In justified cases, the Doctoral Committee may authorize credits earned at an earlier time to be credited towards the degree.

The modules at the Doctoral level to be credited towards the Master's degree in accordance with Section 5.3.1 can be graded and are then included pro rata in the final grade for the Master's degree.

The criteria for passing the Master's level are specified in § 16 Para. 2 PVO.

If a candidate has passed the Master's level in accordance with § 16 PVO, the faculty awards him or her the intermediate academic degree of Master of Science UZH in Informatics, whereby the thesis proposal and paper are weighted together as a Master's thesis in accordance with Section 5.3.2. At the same time, the candidate transfers to the Doctoral level and is matriculated as a Doctoral student.

Students who fail the Master's level can transfer to the regular Master's program in accordance with § 18, Para. 2 PVO. In doing so, the creditable coursework earned at the Master's level is credited in accordance with § 12, Para. 5 PVO. Failed attempts are also credited. The thesis proposal and paper (see Section 5.3.2) cannot be credited.

Furthermore, the provisions of the framework ordinance for the Bachelor's and Master's degree programs at the Faculty of Economics, Business Administration and Information Technology of the University of Zurich apply.

## 6 The Doctoral level of the Doctoral program

The curriculum of the Doctoral level includes modules comprising at least 30 ECTS credits as summarized in Table 3.

Attendance of Doctoral courses, Doctoral seminars, summer schools, Doctoral symposia (Point 1) and the completion of modules in teaching practice (Point 5) and research practice (Point 6) is coordinated with the candidate's supervisor.

**Table 3.** Curriculum of the Doctoral program with credits to be acquired

<b>Modules</b>	<b>ECTS credits</b>
1. Doctoral courses, Doctoral seminars, summer schools, Doctoral symposia	6
2. Research Methods	3
3. Research colloquia (0.5 credits per semester)	3
4. Didactics and Scientific Communication	3
5. Teaching practice (e.g. independent organization and supervision of exercises related to a lecture, co-supervision of seminars, etc.)	6
6. Research practice (e.g. drafting of scholarly papers ready for publication, conducting studies, creating scholarly project applications, etc.)	9
<b>Total (excl. dissertation)</b>	<b>30</b>

For Doctoral students who have been admitted to the Doctoral program with a Bachelor's degree in accordance with § 8, Para. 2 PVO, the minimum number of credits in the Doctoral program is reduced by a maximum of 10 ECTS credits in accordance with § 19, Para. 2 PVO if the corresponding modules have already been earned at the Master's level.

The Doctoral level has been passed when the minimum numbers of credits have been earned as outlined above.

## 7 Earning assessments

The earning of assessments is regulated in §§ 31 - 35 PVO.

### 7.1 Registration and cancelation of modules

The offered modules, the module descriptions as well as information on registration and module booking are published on the websites of the informatics department, the Faculty of Economics, Business Administration and Information Technology or the University of Zurich.

Students may only register for a module if they meet the requirements specified for the respective module. In justified cases, the Doctoral Committee may authorize exceptions.

It is only possible to withdraw from a module without stating reasons until the date specified for the respective module.

Registrations and cancelations outside the deadline specified will not be accepted. The Doctoral Committee decides on exceptions of in cases of hardship on written petition.

If a candidate is prevented from attending an examination or if an ongoing examination is canceled, the regulations under § 33 PVO apply.

### 7.2 Failed attempts and repetitions

For failed attempts and repetitions, §§ 25 - 27 PVO apply.

A total of nine failed attempts are permissible at the Master's level.

Admission is revoked in accordance with §12 PVO if the candidate

- a. has not earned at least half of the necessary ECTS credits at the Doctoral level within 3 years or
- b. has not submitted and received approval for a thesis proposal within 3 years or
- c. has not successfully resubmitted within one year a thesis proposal that was rejected.

The Doctoral Committee decides on exceptions in justified cases.

## 8 Dissertation

The focus of the Doctorate is the preparation of a dissertation. The dissertation must cover a subject in the field of informatics or a cross-discipline area very closely linked to informatics. It should provide evidence of in-depth specialist knowledge, the ability to work according to scientific principles and develop an independent opinion of the Doctoral students as well as make an independent academic contribution in its findings.

### 8.1 Format and content of the dissertation

The format and content of the dissertation are regulated in § 36 PVO.

Whether the dissertation is submitted as a monograph or as a collection of published scholarly papers or such that are suitable for publication (cumulative dissertation) is determined in coordination by the Doctoral student and the dissertation supervisor.

#### *8.1.1 Monograph*

A monograph is a text written by the Doctoral student independently.

Results that the Doctoral student has already published may be part of the dissertation's academic contribution if the prior publication has not already been used to obtain an academic degree. The use of the thesis proposal and paper (see Section 5.3.2) is permissible.

#### *8.1.2 Cumulative dissertation*

The Doctoral student draws up a background document that summarizes the results and contributions of the individual papers. The papers, which are part of the dissertation, must be attached in an appendix.

With the exception of the background document, papers with co-authors may also be used.

### 8.2 Thesis proposal

As a preliminary stage of the dissertation, the candidate must submit a thesis proposal no later than in the third year after starting his or her studies and defend it publicly. The Doctoral Committee decides whether the thesis proposal is accepted.

If a thesis proposal is rejected, it can be resubmitted once within six months.

If the thesis proposal is definitely rejected or if the specified deadlines are not met, the Doctoral Committee decides whether to revoke admission to the Doctoral program in accordance with § 12 PVO.

With the approval of the supervisor, deviation from the content of the thesis proposal is permissible when drafting the dissertation.

## 9 Graduation from the Doctoral studies

The Doctorate is completed upon the submission, evaluation and defense of the dissertation.

Registration for graduation is regulated in § 40 PVO. The documents required are published on the websites of the department.

### 9.1 Submission of the dissertation

Submission of the dissertation is regulated in § 36 PVO.

The supervisor files an application to accept the dissertation with the Doctoral Committee.

#### *9.1.1 Academic contribution, co-authors*

The Doctoral student must submit a signed written declaration that he or she drafted the dissertation independently as a monograph, or for cumulative dissertations, wrote the background document independently and used no uncited sources or aids.

If the academic contribution of a dissertation depends on work with co-authors, the supervisor decides whether the contribution of the Doctoral student to these papers is sufficient as an independent academic contribution. In cases of doubt, the supervisor contacts the co-authors to make this judgement.

As a rule, at least one expert evaluating the dissertation should not be a co-author of any papers used for the dissertation.

### 9.2 Evaluation of the dissertation

Evaluation of the dissertation is regulated in §§ 37 - 39 PVO.

### 9.3 Defense and overall assessment

The Doctorate is completed with the dissertation defense. The department makes a public invitation to the defense. The procedure for the defense and the overall assessment are regulated in §§ 41 and 42 PVO.

The candidate must be continuously enrolled from the start to the finish of the Doctoral program.

The dissertation defense must be scheduled such that the expert opinions on the dissertation and the result of defense are submitted to the department no later than 20 business days before the degree conferral date.

Co-supervisors attending during the defense who are not from the department have an advisory role in determining the grade.

The result is communicated to the Doctoral student immediately following the defense.

## 10 Publication of the dissertation

### 10.1 General provisions

The publication process is regulated in §44 PVO.

The Doctoral student is obligated to publish the dissertation within two years of the successful defense and the must provide the central library with the deposit copies.

The deposit copies must bear a title page approved by the department and include a note that the department has approved the publication in this form. The date of the printing approval must be entered on the title page in accordance with Section 10.2 (month and year only). A brief CV must be included on the last page.

If the dissertation consists of a collection of papers, the background document must be published in accordance with § 44 PVO. The papers belonging to the dissertation must be added as an appendix to the background document, unless third-party copyrights preclude this.

### 10.2 Approval of publication

Before printing, the Doctoral student must submit the final version of the dissertation to the department for approval. A separate description of the changes made compared to the assessed version of the dissertation must be attached.

After printing is approved, only the correction of errors in form is permissible; no modifications may be made to the content.

### 10.3 Publication formats

The following publication formats are permitted for the dissertation:

- Publication as printed brochures
- Publication in book trade
- Publication on the Internet

The Doctoral Committee may approve the printing of only part or an excerpt of the dissertation as well as the use of other appropriate reproduction methods on written petition.

#### *10.3.1 Publication as printed brochures*

The relevant provisions of the central library must be observed when printing.

#### *10.3.2 Publication in book trade*

If the Doctoral student publishes the dissertation in the book trade, he or she must

- a. submit to the department a contract signed by the Doctoral student and a publishing house,

- b. designate the publication by separate reference as a reprint of the dissertation approved by the Department of Informatics of the Faculty of Economics, Business Administration and Information Technology of the University of Zurich, and
- c. publish the dissertation in the approved form as a book available in the book trade.

### *10.3.3 Publication on the Internet*

The following rules apply for publication on the Internet:

1. Each deposit copy must consist of a printed brochure and a CD/DVD. The CD/DVD must contain the complete dissertation in a format that can be published on the Internet. The printed version must contain the complete text as well as graphics, figures and other components of the dissertation, insofar as this is technically possible and reasonable as regards the production costs.
2. Publication on the Internet must be carried out at the discretion of the department by the department itself or an appropriate body of the University of Zurich. The department or another appropriate body of the University of Zurich must ensure that the publication is available electronically for a period of ten years. The department will continue to make the dissertation available electronically after this period at its discretion.

## **10.4 Deposit copies and Doctoral diploma**

The number of deposit copies to be delivered to the central library is determined by the publication format and includes, unless specified otherwise by the central library,

- when published as a brochure: 140 copies
- when published in the book trade or on the Internet: 6 copies

The relevant provisions of the central library must be observed.

As soon as the deposit copies have been received, the Doctoral diploma is prepared and sent, as a rule, to the Doctoral student within four to five weeks.