



## **Doctoral programme regulations of the doctoral programme «Imaging Sciences in Medicine»**

(February 8, 2023)

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

*The assembly of the Faculty of Medicine decrees:*

### **A. Scope and purpose**

#### **1. Scope**

These doctoral programme regulations govern the doctoral programme «Imaging Sciences in Medicine» (hereafter: the doctoral programme) of the Faculty of Medicine of the University of Zurich. It specifies and completes the ordinance on obtaining a "Doctor scientiarum medicarum (Dr. sc. med.)" at the medical faculty at the University of Zürich<sup>1</sup> (PromVO Dr. sc. med.).

The following regulations apply for doctoral students, who obtain a degree as Dr. sc. med. in accordance with the Doctoral programme regulations of the medical faculty.

#### **2. Goals**

The doctoral programme allows doctoral students to conduct high-quality research in imaging sciences with radiological methods and offers a structured post-graduate education in the basics and methods of medical imaging.

The focus of the doctoral programme is on the investigation of the anatomy and pathology of healthy and diseased persons by means of biomedical imaging methods and the combination of basic and applied research to develop and optimize imaging diagnostics, interventions and therapies. The doctoral programme is open to international applicants.

#### **3. Target group**

The competitive doctoral programme aims to attract outstanding national and international applicants, who want to deepen their knowledge in biomedical imaging.

#### **4. Additional regulations**

Additional regulations for the doctoral programme are described in the relevant fact sheets. The doctoral programme commission has the final decision on questions which are regulated

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<sup>1</sup> LS 415.433.3



neither in the PromVO Dr. sc. med. nor in the doctoral programme regulations nor in the fact sheets.

## **B. Organization and responsibility**

### **5. Doctoral projects**

For *Track 1* doctoral projects the members of the medical faculty are invited by the doctoral programme coordinator to announce doctoral projects twice per year. The announced doctoral projects for doctoral students have to be securely financed (for at least 3 years, see clause 14 paragraph 4).

For *Track 2* the admission of doctoral projects to the doctoral programme is examined by the admission committee. It is strongly recommended to start the doctoral project only after admission to the doctoral programme.

### **6. Doctoral programme commission**

The doctoral programme commission instated by the medical faculty has overall responsibility and guidance for the doctoral programme.

It is composed at least of the following four members of the medical faculty:

- a. Two co-directors
- b. Two more members with relevant professional expertise

Moreover, the coordinator of the doctoral programme and two doctoral student representatives with consulting vote may join the doctoral programme commission.

The term of membership is two years with a possible renewal. The role of chair can only be taken by a member of the faculty of medicine and can only be substituted by another member of the faculty of medicine.

The doctoral programme commission manages the doctoral programme and undertakes the following tasks:

- a. Approval of the assembly of the doctoral thesis committee
- b. Decision about the development of the curriculum and the coordination of the curricular requirements
- c. Involvement in the selection and admission of the applicants<sup>2</sup>
- d. Supporting efficient cooperation with the medical faculty

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<sup>2</sup> see § 8



## **7. Programme coordination**

The coordination office is responsible for the scientific planning and implementation of the programme including the block modules, exchange options and other organizational content-related aspects of the programme. Additionally, the programme coordinator acts as contact person for the doctoral students and guarantees the exchange of information between both faculties. The programme coordinator collaborates closely with the programme directors.

## **8. Admission commission**

The admission commission comprises a representative of the doctoral programme commission and at least two members of the doctoral programme. The admission commission convenes for each application phase, twice per year. Gender equality is respected in the composition of the admission commission.

## **9. Thesis committee**

The thesis committee is responsible for the scheduling of content and timeline, supervision and evaluation of the projects which lead to a doctoral degree. The thesis committee is put together until the end of the first semester as a general rule.

The thesis committee comprises at least the following three members in accordance with § 9 PromVO Dr. sc. med.:

- a. The supervisor of the thesis, who must at least have a doctorate,
- b. A member with the right to award doctorates Dr. sc. med. in accordance with § 11 PromVO Dr. sc. med.,
- c. Another member, who must at least have a doctorate and is preferably not an employee of the University of Zurich (UZH) or the Federal Institute of Technology Zurich (ETHZ).

A member of the medical faculty acts as the chair.

At least half of the members must be members of the medical faculty of the University of Zurich.

The thesis committee meets within the first six months after the start of the doctorate and then at least once a year with the doctoral student (as a rule there are at least three meetings, see clause 10). The thesis committee decides about extensions in justified cases.

## **10. Thesis committee meetings**

The focus of the first thesis committee meeting is the planning of the doctoral project and the milestones.



The focus of the following thesis committee meetings is the progress of the doctoral project and the planned publications as well as the teaching activities of the doctoral student.

The focus of the final thesis committee meeting is the planning of the completion of the doctoral thesis.

On the occasion of each thesis committee meeting, the doctoral student prepares a written report of four to six pages for the thesis committee. The thesis committee signs the report. Then the report and, where applicable, measures that have been agreed upon for the continuation of the scientific project are submitted to the programme coordinator. Combined reports covering several years will not be accepted.

## **11. Supervisor of the doctoral thesis**

The supervisor of the thesis acts to support the doctoral student. The supervisor of the thesis supports the doctoral student with regular discussions that are aligned with the progress of the thesis. As a general rule, the supervisor of the thesis is determined during the first semester.

Depending on the research project it is possible to have two supervisors. At least one of the supervisors is a member of the doctoral programme.

If the supervisor of the thesis is a member of the medical faculty, he/she can also act as a chair of the thesis committee.

In case of dissent between doctoral student and his/her supervisor, mediation can be provided by the thesis committee initially and if needed, the doctoral programme commission.

## **C. Admission to the doctoral programme**

### **12. Admission requirements**

Applicants for the doctoral programme should be exceptionally well qualified and motivated in line with the admission requirements of the PromVO Dr. sc. med. Admission is possible with a medical or medically related master's degree.

The admission can be granted with conditions or restrictions, e.g. to complete a curricular part at a Swiss University or at the ETHZ. ECTS credits acquired at a foreign University have to be approved by the doctoral programme commission.

The candidates are informed in writing about the decision of the admission committee.

### **13. Application**

Applications have to be submitted in a timely manner (deadlines July 1, December 1) and



should include the following documents:

- a. CV
- b. Academic certificates
- c. Letter of motivation in English with a description of the applicant's interests in the field of medical imaging as well as suggestions for research questions that the applicants would like to address, the reasons for the application, and the future career plans.
- d. Two letters of recommendation that refer to the qualification and potential of the applicant.

The admission committee screens all applications that were submitted on time.

Shortlisted applicants are invited for a personal interview.

#### **14. Selection interview**

The admission interview with the admission committee will be held in English and, if necessary for the project, partially in German. The interview can also be conducted via video conference.

Applicants are invited to present previous results (e.g. master or doctoral thesis) in a ten-minute presentation as well as a research question they are especially interested in. The presentation is followed by questions relating to the applicant's qualifications and medical knowledge.

The interview allows the admission committee to thoroughly evaluate the applicant's capabilities, motivation, expectation and focus regarding the completion of the doctoral programme. It also allows evaluation of the eligibility of the applicant for admission into the doctoral programme.

After the interview, the admission committee decides whether the applicant is sufficiently qualified to be eligible for the doctoral programme. The intended supervisor of the thesis has to confirm and sign the secured financing of the applicant's salary for at least 3 years in accordance with § 10 PromVO Dr. sc. med. respectively clause 11 of the doctoral programme regulations.

#### **D. Structure of the doctoral programme**

##### **15. Duration of the doctoral programme**

As a rule, the doctoral programme lasts three years. A part-time completion of the programme is possible upon consultation.

The maximum duration is six years. The thesis committee decides about an extension in justified cases (see § 14 PromVO Dr. sc. med.).



## **16. Structure of the doctoral programme**

The doctoral programme consists of

- a. Writing a doctoral thesis in accordance with § 25 PromVO Dr. sc. med.
- b. Modules amounting to 12 ECTS credits (in accordance with § 13 Abs. 1 lit. b PromVO Dr. sc. med.).

The thesis is intended to prove the capability of the doctoral student to do scientific research independently.

## **17. Curriculum**

The curriculum is composed of

- a. Mandatory modules constituting 10 ECTS credits,
- b. Optional modules constituting at least 2 ECTS credits.

Attending the PhD-Seminar programme throughout the entire term of the thesis is mandatory.

The module catalogue will be made available.

The selection of optional modules should be discussed with the supervisor.

Doctoral students can also attend relevant modules outside of the doctoral programme.

The modules provide doctoral students with the basics of methods for medical imaging. They include relevant complementary techniques and their fields of application in different medical fields as well as the latest methods for image analysis.

The recognition and crediting of academic performance rendered outside of the doctoral programme comply with § 24 PromVO Dr. sc. med. Conference participation in the form of oral and poster presentations does not provide ECTS credits, as it is an integral component of research activities.

## **18. Doctorate and other activities in a clinic or at another institute**

For doctoral students working as physicians, a maximum of 20 % of the working time of the doctoral student employment is allowed for clinical activity. Doctoral students who are not working with patients are allowed to work for a clinic or for an institute for a maximum of 20 % of the working time of the doctoral student employment.



## **19. Teaching duties**

Doctoral students are required to teach for 100 – 200 hours distributed over the three years of their doctorate. Assistance in courses offered for the doctoral programme and the supervision of two master theses (each maximum 50 hours) can be credited as a teaching achievement. Other forms of teaching such as lectures, tutoring and presentations can also be credited.

## **E. Completion of the doctoral programme**

### **20. Requirements for the completion**

The requirements for the successful completion of the doctoral programme:

- a. Completion of the research project and writing of a thesis. As a general rule, the thesis is a cumulative dissertation, which combines different original articles of which at least one is a publication, or article accepted for publication, with a first authorship in an internationally recognized journal in the respective field. For cumulative dissertations, the thesis must have an introduction and discussion written by the doctoral student.
- b. If the thesis as Dr. sc. med. builds upon a thesis as Dr. med., Dr. med. dent. or Dr. med. chiro., both theses have to be submitted as two separate, consistent, complete and self-contained theses. Each of the theses has to meet the standards of the respective doctoral degree ordinance and doctoral regulation as well as the published fact sheets.
- c. The successful completion of the mandatory and the optional modules (constituting at least 12 ECTS credits).
- d. Successful completion of the doctoral examination.

### **21. Initiation of the registration for completion**

Completion of the thesis is recommended by the thesis committee during their last meeting with the doctoral student (see Clause 9). Registration for the doctorate is initiated by the submission of the thesis to the members of the thesis committee and to the office of the Dean of the medical faculty (exam registration: together with the confirmation of acquired ECTS credits and the documented teaching activities during the doctorate).

The thesis and the expert opinion in accordance with § 27 PromVO Dr. sc. med. are confirmed by circular resolution by four faculty members. Within two weeks of the applicant's successful completion of the doctoral examination, the chair of the thesis committee sends a written statement to the medical faculty recommending that the thesis be approved.



## **22. Doctoral examination and final presentation**

The thesis committee defines the date for the doctoral examination with the doctoral student.

The examination board consists of the members of the thesis committee and an additional member of the faculty. Attendance of a substitute member of the thesis committee is possible; however, during the doctoral examination at least two members with the right to award doctorates have to be present. The chair of the thesis committee leads the examination.

The doctoral student summarizes the thesis results in a 30-minute presentation within the scope of a public event. After the presentation the audience can ask questions.

After the presentation there is a private interview by the examination board about the content of the thesis, the scientific field of the thesis, and basics that were acquired in the curricular components. Possible corrections of the thesis will also be discussed.

## **23. Title**

The title Dr. sc. med. is awarded by the medical faculty after request of the chair of the thesis committee. The English translation is PhD (see § 32 paragraph 1 PromVO Dr. sc. med.). The title is awarded with delivery of the certificate only after submission of the obligatory thesis copies (see §§ 33 i.V.m. 32 paragraph 2 PromVO Dr. sc. med.).

## **24. Matriculation and fees**

In accordance with § 41 of the regulation for the admission to the course at the University of Zurich the doctoral students must be matriculated during the entire study period until the successful completion. The fees are charged by the student administration office of the University of Zurich.

## **25. Confidentiality**

An important aspect of the doctoral programme is the exchange of scientific data and results between the various institutes at the involved Universities. Such results should be treated as strictly confidential by all those involved and may not be passed along to individuals outside of the programme if they have not yet been published by the author or their initial investigator. No member of the doctoral programme may use scientific results to the disadvantage of the involved University. In particular, no member may infringe upon the University's right for the protection of its intellectual property by publishing data prematurely.





## **F. Final provisions**

### **22. Entry into force**

These doctoral programme regulations came into effect on February 8, 2023.