Regulations for Doctoral Studies

School of Science

Technische Universität Dresden

Dated 17th July 2008

The masculine form used in this regulation equally includes female persons.

§ 1 Preamble

Doctoral studies in Mathematics and Natural Sciences are conducted in accordance with the doctorate regulations of the School of Science currently in force.

The doctoral studies in accordance with § 42 SächsHSFG (postgraduate studies) outline one possible option of obtaining a doctorate degree. It leaves other options unaffected. Foundation for these doctoral studies as well as any other doctorate options is that the doctorate represents the outcome of scientific work and individual original research results.

§ 2 Scope

The regulation describes goals, content, structure and implementation of the doctoral studies at the School of Science, as well as the nature and extent of consultation provided by the supervising University Professor.

§ 3 (Study) Objectives

The aim of the doctoral studies is, to further student's knowledge and abilities with regards to a well-rounded personality development, a qualified and focused training of young scientists as well as promoting the doctorate.

Furthermore, doctoral students should be supported in exploring the following skills:

- planning and undertaking scientific research independently

- furthering a scientific field through one's own, original scientific contribution

- summarizing obtained data for scientific publication

- presenting and defending the obtained scientific data to an expert peer group

- gaining knowledge that exceeds the level of completed Diploma- or Masters Studies.

- gaining key qualifications

- using the German and English language in order to present research findings.

§ 4 Formal pre-requisites

The admission for doctoral studies is granted, when the applicants have been admitted to the doctorate according to §3 of the doctorate regulations of the School of Science.

§ 5 Language of education, duration

Lessons are conducted in the German and English language. Duration of doctoral studies should amount to 20 semester hours.

§ 6 Execution of doctoral studies

(1) In purpose of fulfilment of the under § 3 mentioned goals, an individual study programme will be compiled together with the supervising professor. This will include 'in-depth specialist studies', doctoral seminars and other scientific events. In order to gain key qualifications, central facilities at our university can be used.

(a) In-depth specialist studies

In-depth specialist studies should enable the doctorate candidate to gain specific knowledge in scientific subject areas (e.g. through attending lectures or self-learning), which will facilitate the successful dissertation process and exceed the knowledge gained during the diploma-or master Studies. Two in-depth specialist study areas are to be chosen.

Subjects have to comply with subject area requirements stated in the doctoral viva § 5 (2) of the doctorate regulations. They are to be approved by the doctorate committee of the School of Science and will be concluded with a 30-minute oral exam or a written subject examination.

Examiners for the subject areas will be appointed by the doctorate committee. Both examiners must be university professors or private university lecturers (PD). Exceptions to this rule may be granted on request by the responsible member of the Doctorate Committee.

(b) Doctoral seminars and other scientific events

The doctoral seminar furthers the ability to present and discuss one's own and other research projects, as well as research results and findings of literature searches in a comprehensive manner, especially in the German and English language.

Colloquia, other scientific events and courses present the latest research results and methods, also in interdisciplinary fields.

(c) Key qualifications, including language training

The doctoral student should obtain key qualifications such as; communication, rhetoric, presentation, time-management, social and intercultural competencies, patent system, intellectual property rights, foreign languages, university teaching methods as well as acquisition of third party funding.

(2) The supervising professor consults the doctoral students in personal meetings and doctoral seminars. This also includes an introduction to scientific methodology. They give recommendations with regards to the doctoral study plan.

(3) The dissertation will be drawn up according to the doctorate regulations.

§ 7 Evaluation of examination performances, establishing an equivalent grade for the doctoral viva

    (1) The grades for the individual examination results in the specialized subject areas according to §6 sub sentence 1(a) will be determined by the examiners. The following grades are to be used for scoring the examination results:

1 = very good   = an outstanding achievement

2 = good = an achievement, considerably surpassing the average requirement

3= satisfactory = an achievement, meeting the average requirement

4 = adequate   = an achievement, meeting the requirements in spite of its deficiencies

5 = poor = an achievement, failing to meet the requirements due to its considerable deficiencies

To permit a more differentiated evaluation, intermediate values may be specified by increasing or decreasing the mark by 0.3. The grades 0,7; 4,3; 4,7 and 5,3 are not permitted. An examination result marked as "poor" may only be re-taken within a period of one year.

    (2) Upon application by the doctoral student, the achieved grades will be used to establish an equivalent grade for the doctoral viva. This is only legitimate if both respective subject exams were awarded with at least the mark "satisfactory" (3,0) at first attempt. Furthermore, attendance of the doctoral studies to the extent necessary according to §5 has to be proven.

The average of both grades achieved in the specialized exams, forms the equivalent grade for the doctoral viva. Only the first decimal place after the comma will be regarded, all others will be deleted.

§ 8 Conclusion of doctoral studies

Doctoral studies are concluded with the performance of doctoral dissertation according to the doctorate regulations of the School of Science and being awarded the academic degree of a

"Doctor" (Dr. rer. nat or Ph. D.). The doctoral student can be awarded a certificate stating the study performance in addition to the doctoral certificate.

§ 9 Entry into force and publication

These regulations become effective as of 01.10.2008 and will be published in the official announcements of the Technische Universität Dresden.

Issued on the basis of the decision of the Faculty Council of the Faculty of Mathematics and Natural Sciences of the Technische Universität Dresden from 16th April 2008 and consent of the Post-graduate Commission of the Technische Universität Dresden from 16th July 2008. Amended on the decision of the School Committee of the School of Science on 27th June 2018.

Dresden, 19th August 2008

Dean of the School of Science, Technische Universität Dresden

Prof. Dr. Michael Ruck

***

Commentary/ Explanation:

 (The commentary does not form part of the regulations)

For many years, committees and political institutions have been debating the advanced training of doctoral students. Tenor of these discussions ranges from the idea of fully structured doctoral studies to the complete rejection of same.

In accordance with the tradition of a German doctorate, the focus lies on scientific research and in nurturing young scientists to great independence. Nevertheless, the pre-ceding studies should be complemented through supplemental training throughout.

Content of the doctoral studies in Mathematics and Natural Sciences are guided by the tasks of the so called postgraduate studies defined under §42 SächsHG. Doctoral studies aim at deepening student's knowledge and abilities with regards to a well-rounded personality development, a qualified and focused training of young scientists, thus facilitating the doctorate.

- the doctorate is centred on the scientific dissertation;

- the doctoral phase is not regimented and is therefore not to be understood as the third stage of higher education. The doctoral phase already serves as an exercise of profession;

- the doctoral viva can be replaced by in-depth specialist studies (courses and/or self-study) with relevant examinations as an option

- doctoral and research seminars of one's own faculty should be attended and so-called key qualifications gained;

- the doctoral regulations apply without exceptions.

Performance in the doctoral procedures:

- Thesis/ dissertation

- Thesis defence

- Doctoral viva (alternatively: proof of successful participation of doctoral studies at the School of Science including the conclusion of 2 subject exams

Furthermore, doctoral students should be supported in gaining the following skills:

- planning and undertaking scientific research independently

- furthering a scientific field through one's own, original scientific contribution

- summarizing obtained data for scientific publication

- presenting and defending the obtained scientific data to an expert peer group

- gaining knowledge that exceeds the level of Diploma- or Master Studies.

- gaining key qualifications

- using the German and English language in order to present research findings.

With matriculation of our doctoral candidates, the above stated regulation applies. No disadvantages will result for a doctoral candidate in regards to opting for the previous procedures. The guidelines for the doctoral procedures remain within the doctoral regulations.

Until submission of the doctoral thesis, the doctoral candidate may choose between the current or previous procedures of the doctoral viva. The current doctoral viva procedures therefore represent an equally valid qualification if subject exams have been failed.

In this light, the under §7 subsection 1 stated possibility to retake a failed subject exam is to be seen. However this subject exam cannot be used as an alternative for the doctoral viva. (the exam has to have been awarded with at least the mark "satisfactory" (3,0) at first attempt.)