Please note: The German text of the Study Regulations is the exclusively legally binding version. The following English translation is merely provided for reference.

Study Regulations for the Doctoral Programme in Mathematics at the Faculty of Mathematics within the Bielefeld Graduate School in Theoretical Sciences (BGTS) of 14 March 2016

Based on § 2 (4) and § 67 (2) of the Higher Education Act of the State of North Rhine-Westphalia (*Hochschulgesetz*; HG) of 16 September 2014 (GV. NRW. p. 547) and the general regulation of doctoral studies of Bielefeld University (RPO) of 15 June 2010 (Bielefeld University Gazette – Official Announcements – year 39 No. 12 p. 98), the Faculty of Mathematics at Bielefeld University has issued the following study regulations:

Preamble

The study regulations for the doctoral programme in Mathematics at the Faculty of Mathematics govern the course of the doctoral programme. The doctoral degree regulations of the Faculty of Mathematics apply to the conduct of the doctoral procedure. The doctoral programme will take place under the umbrella of the Bielefeld Graduate School in Theoretical Sciences (BGTS), an academic department of the Faculties of Mathematics, Physics, and Economics at Bielefeld University in cooperation with the Institute of Mathematical Economics (IMW) at Bielefeld University.

§ 1
Scope of application

The study regulations stipulate the goals, structure, and course of the study programme in the BGTS doctoral programme in Mathematics at the Faculty of Mathematics based on the doctoral degree regulations of the Faculty of Mathematics of Bielefeld University of 3 December 2012 (Bielefeld University Gazette – Official Announcements – year 41, No. 17, p. 433), amended by the rules of 1 March 2013 (Bielefeld University Gazette of Bielefeld University – Official Announcements – year 42, No. 5, p. 86) as amended from time to time.

§ 2
Goals of the doctoral programme

(1) The doctoral programme prepares students for the doctorate in mathematics (Dr. math.). It is to confer knowledge and skills needed to work independently on academic problems in the field of mathematics and using adequate methods, and to complete the doctoral examination on this basis.

(2) The doctoral programme also is to prepare doctoral students for a qualified academic and non-academic career.

(3) The broad range of qualifications offered by the BGTS fulfils two essential tasks in the BGTS doctoral programme in Mathematics: On the one hand, it contributes to conveying academic knowledge and skills within the meaning of paragraph 1, which form the basis for the work on the individual doctoral project. On the other hand, it affords doctoral students the opportunity to expand their academic qualifications with interdisciplinary skills and international perspectives during the doctoral phase.

§ 3
Responsibilities

(1) The doctoral committee of the Faculty of Mathematics is responsible for the organisation and implementation of the doctorate in accordance with the current doctoral degree regulations of the Faculty of Mathematics.

(2) The Faculty of Mathematics is responsible for the organisation and implementation of the academic programme of the doctoral programme in coordination with the BGTS.

(3) Doctoral students are supervised by a main supervisor. A second supervisor generally should be appointed for interdisciplinary papers. Further details are stipulated in the doctoral degree regulations of the Faculty of Mathematics.

§ 4
Course start, duration and scope of study

(1) The doctoral programme in Mathematics at the Faculty of Mathematics can be started in the winter and summer semesters.

(2) The duration of studies, including the writing of the doctoral thesis after having successfully completed a relevant degree programme with a standard period of study of at least eight semesters, is generally three years

(= six semesters); after having successfully completed a degree programme with a standard period of study of less than eight semesters, including the pre-doctoral studies, it is generally four years (= eight semesters).

(3) A total of 30 credit points (CP) must be earned in the course of the doctoral programme. Credit points are calculated according to the expected workload of the doctoral students. Acquisition of one credit point is based on a workload of 30 hours in accordance with ECTS.

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§ 5
Access requirements and enrolment

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(1) Access to the doctoral programme requires acceptance as a doctoral student in accordance with § 6 of the doctoral degree regulations of the Faculty of Mathematics.

(2) Enrolment in the doctoral programme takes place after acceptance as a doctoral student in accordance with paragraph 1.

(3) Exmatriculation will take place if the doctoral student is no longer accepted as such or if the doctorate has been completed or definitively failed.

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§ 6
Student Counselling Service

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(1) The general Student Counselling Service is provided by the ZSB – Central Student Counselling Service of Bielefeld University.

(2) The university lecturers involved in the degree programme and the BGTS will provide comprehensive advice on questions of study organisation and preparation.

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§ 7
Study requirements

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(1) As a rule, study requirements must be met in the following four areas:

1. "Subject-specific qualification"
   - Subject-specific lectures: Specialising lectures from the doctoral student's research field (2 CP per semester)
   - Seminars, project seminars, working group seminars (1 CP per semester)
   - Conferences, workshops, summer schools (1 CP per event)
   - Research stays with a duration of one week or more (1 CP per month)

2. "Interdisciplinary qualification"
   - Panorama courses: Introductions to the main results and ideas from the disciplines involved in the BGTS (2 CP per semester)
   - BGTS colloquium (1 CP per year)
   - Interdisciplinary colloquiums, e.g. Mathematical Physics (1 CP per year)

3. "Extracurricular qualification"
   - Teaching activity (2 CP per semester)
   - Organisation of seminars, cluster groups, workshops (1 CP)
   - Seminars in the area of "key qualifications" (1 CP per course)

4. "Presentation"
   - Presentation in a seminar/colloquium or at a workshop/summer school (2 CP per presentation)
   - Poster presentation at a symposium (1 CP per poster)

(2) The 30 CP to be achieved should be spread out among the four areas as follows:

(10 - 14 CP) Subject-specific qualification	Average 12 CP
(3 - 7 CP) Interdisciplinary qualification	Average 5 CP
(3 - 7 CP) Extracurricular qualification	Average 5 CP
(6 - 10 CP) Presentation	Average <u>8 CP</u>
	30 CP

(3) Specific selection of study requirements will take place in coordination with the main supervisor, under consideration of the student's previous academic knowledge.

(4) Doctoral students must have confirmed the type and scope of the credits earned after completing the coursework by the respective lecturer. Corresponding certificates of achievement are then issued with the support of BGTS.

(5) The doctoral student generally must undergo a specified quality check by the respective main supervisor at the end of the first year of their doctoral studies. The supervisor will review the quality and successful progress of the doctoral student in an appropriate manner. This is intended to ensure the progress of the doctoral project. The subject of this quality control can be content from the courses attended as well as topics developed independently by the doctoral student. Quality control can take the following form, for example: Seminar presentation with discussion, a publication, examination results in the context of the selected courses, a quality assurance discussion. The precise content, scope, and procedure of the quality control must be recorded in writing, e.g., in the supervision agreement.

(6) If the quality control is not completed successfully, it may be repeated within six months. If the quality control is still not successfully completed at that point, the doctoral student and the main supervisor are obligated to have a detailed counselling interview about the future of the doctoral project. The quality control can then be repeated. Successful completion of the quality control in one of the areas according to paragraph 1 may be recognised with 2 CP, depending on its design.

§ 8
Crediting of study requirements

Study requirements completed at state or state-recognised universities, at state or state-recognised vocational academies or in degree programmes at foreign state or state-recognised universities will be credited upon application, provided that there is no significant difference in the skills acquired compared to the academic achievements that is being replaced. The chair of the doctoral committee will make the decision on crediting upon coordination with the director of the BGTS. The candidate must make the effort plausible in cases of doubt.

§ 9
Completion of study programme and certificate

(1) Prerequisites for the successful completion of the doctoral programme are:

- successful completion of the doctoral procedure in accordance with the doctoral degree regulations of the Faculty of Mathematics,
- acquisition of 30 CP from the four areas listed in § 7, and
- successful completion of the quality control in accordance with § 7 (5).

(2) The doctoral student will receive a BGTS certificate that certifies all academic achievements including the associated 30 CP under consideration of the individual study programme upon successful completion of the doctoral programme.

§ 10
Entering into effect

The study regulations enter into effect on the day after their announcement in the Bielefeld University Gazette – Official Announcements.

Issued based on the resolution of the Faculty Conference of the Faculty of Mathematics of Bielefeld University of 28 January 2016.

Bielefeld, 14 March 2016

The rector
of Bielefeld University
University Professor Dr.-Ing. Gerhard Sagerer