Admissions Regulations for the Master's Degree Program M.Sc. Data Science within the Department of Mathematics and Computer Science and the Department of Education and Psychology at Freie Universität Berlin

Disclaimer: Please note that only the German version of this document is legally binding. This translation is intended for the convenience of the non-German-reading public and is for informational purposes only.

Preamble

On the basis of Section 14.1.1.2 of Freie Universität's supplemental rules and regulations (*Teilgrundordnung [Erprobungsmodell]*) from October 27, 1998 (*FU-Mitteilungen* 24/1998), in conjunction with Section 15 of the Law on Admissions to Higher Education in the Federal State of Berlin for Programs with Admission Requirements (*Berliner Hochschulzulassungsgesetz*, BerlHZG), in the version of the announcement of the amended version from October 9, 2019 (GVBl., p. 695), last amended July 5, 2022 (GVBl., p. 450) in conjunction with Section 10.5.2 of the Berlin Higher Education Act (*Berliner Hochschulgesetz*, BerlHG) in the version of the announcement of the amended version of July 26, 2011 (GVBl., p. 378), most recently amended on July 10, 2024 (GVBl., p. 461), the Joint Commission (*Gemeinsame Kommission*) for Data Science appointed by the Department of Mathematics and Computer Science and the Department of Education and Psychology at Freie Universität Berlin issued the following regulations on November 11, 2024:[1]

Section 1

Scope

These regulations govern admissions to the study program in accordance with Section 10.5.2 BerlHG and the selection procedure for the allocation of places in accordance with Section 15.1.1.1 BerlHZG for the master's degree program M.Sc. Data Science in the Department of Mathematics and Computer Science and the Department of Education and Psychology at Freie Universität Berlin. This is a consecutive master's program as defined under Section 23.3.1.1a BerlHG.

Section 2

Number of Available Places and the Application Process

(1) The number of places available for the master's degree program for each given admissions cycle is stipulated in Freie Universität Berlin's General Admission Regulations.

(2) The application for admission must be submitted electronically to the Executive Board of Freie Universität Berlin – Admissions Office using the online application system. The form "Self-Indication of Admission Requirements and Selection Criteria" (Appendix 2) is a necessary part of the application. It must be completed in full and submitted with the application.

(3) The application deadline is May 31 of each year.

(4) Applications for admission must be accompanied by an official certified copy of the applicant's first university degree (or equivalent professional certification) referred to below in Section 3.1 in the format specified by the Executive Board of Freie Universität Berlin – Admissions Office.

(5) Applicants can still submit their application for the master's degree program even if they do not have the university degree referred to below in Section 3.1 because certain assessment results are not yet available, as long as they otherwise have a good academic record based on previous assessment results, and if the university degree referred to in Section 3.1 will be obtained before the master's degree program begins and as long as the requirements stipulated in Sections 3.2 and 3.3 are also fulfilled in due time. This expectation is fulfilled in particular if at least two-thirds of the total coursework has been evaluated, the application for the final thesis project has been submitted, and the work schedule for the thesis has been set so that it can be completed in due time before the start of the master's program.

[1] These regulations were approved by the Executive Board of Freie Universität Berlin on January 23, 2025, and by the Berlin Senate Administration's department with responsibility for higher education on November 13, 2024.

The applicant's grade point average will be considered as part of the application and factors into the selection process. The grade point average is based on the applicant's previous coursework as reflected in their current transcript, which they should submit with the application. In this case, the result of the university degree is considered irrelevant.

(6) Freie Universität Berlin has no obligation to investigate the facts of a case on its own initiative (*ex officio*).

Section 3
Admission Requirements

(1) The admission requirement for the master's degree program is a first university degree or an equivalent degree from an institution of higher education within or outside of Germany. This degree must have been completed in the subject of computer science for a total of 180 credit points/ECTS credits, or in another subject in which modules in mathematical subjects were successfully completed for at least 20 credit points/ECTS credits and computer science modules were successfully completed for at least 10 credit points/ECTS credits. Of the mathematical modules, at least 5 credit points/ECTS credits must be in the areas of linear algebra or analysis and at least 5 credit points/ECTS credits must be in the areas of either probability theory or statistics. Of the computer science modules, at least 5 credit points/ECTS credits must be in an area related to algorithms and at least 5 credit points/ECTS credits must be in a module that provided training in an advanced programming language (e.g., C/C++, Java, or Python).

(2) Applicants who did not complete a university degree at an institution where coursework was conducted in English must demonstrate English language skills at a level equivalent to C1 of the Common European Framework of Reference for Languages (CEFR).

(3) The examination board determines the equivalence of any documentation provided. Evidence of qualifications obtained through another course of university study may also be submitted for consideration.

Section 4
Quotas, Selection Criteria, Organizational Aspects

(1) 80 percent of the study placements that are still available after the preliminary quotas have been filled will be distributed according to the selection process as outlined in this document (higher education quota). 20 percent of the study placements will be distributed according to Section 15.1.1.2 BerlHZG. 5 percent of the study placements are reserved for the quota stipulated in Section 15.1.3 BerlHZG.

(2) Candidates are selected for the master's degree program according to the following criteria:

1. The level of qualification as demonstrated by the applicant's academic performance in their degree programs (Section 15.2.1 BerlHZG)

2. Considerations of the applicant's academic background demonstrated by their choice of previous degree program reflecting their specific motivation and aptitude for the master's degree program (Section 15.2.1.4 BerlHZG)

3. Other qualifications acquired outside of a university degree program (Section 15.2.1.5 BerlHZG).

(3) In the selection process, selection points will be awarded under the criteria defined in Sections 4.2.1 and 4.2.3 above. The maximum number of points that can be awarded is 100.

(4) For the selection criteria listed under Section 4.2.1 of these regulations, a maximum of 60 selection points can be awarded in relation to the average grade stated on the degree certificate for the candidate's previous degree program. The points for each average grade are listed in Appendix 1 to these regulations.

(5) A maximum of 20 selection points can be awarded for the selection criterion set out in Section 4.2.2 of these regulations. Points are awarded based on the following:

1. 10 points for evidence of examinations and coursework in the field of theoretical computer science in which at least 15 credit points/ECTS credits were obtained.

2. 10 points for evidence of examinations and coursework in the field of interdisciplinary data science, in particular psychology, digital humanities, or natural sciences, in which at least 15 credit points/ECTS credits were obtained.

Only those modules that deal exclusively with the areas of study listed above will be counted. Evidence is provided by submitting a transcript of records/grade report together with the corresponding module description.

(6) A maximum of 20 selection points can be awarded under Section 4.2.3 of these regulations by providing evidence of at least 450 hours of relevant, research-based activities in the field of data science, for example, collaboration in research projects as a student employee or research assistant during or after their bachelor's degree program.

(7) At least two admissions officers will be appointed to supervise the selection process. They are appointed by the chairperson of the joint commission to carry out the selection interviews on behalf of the Executive Board of Freie Universität Berlin. The appointed admissions officers must be authorized examiners for the master's degree program – or otherwise be very familiar with the demands and regulations of the master's degree program – and must be university employees with Freie Universität Berlin as their main employer. These positions may not be filled by substitutes or alternates.

Section 5
Admission Decision

(1) The decision on which applicants are to be selected is made by the Executive Board of Freie Universität Berlin – Admissions Office, on the basis of the outcome of the selection process.

(2) The selected candidates receive a formal notification of admission stating the deadlines for their written acceptance and enrollment. Failure to meet these deadlines will result in the place being offered to the next candidate on the ranking list.

(3) Candidates selected based on their transcripts are granted tentative admission and can enroll in the first semester of the program on a conditional basis. Generally, the university degree required for admission as described in Section 3.1 must be submitted by the end of the first semester of study, together with relevant documentation proving that any other requirements associated with the degree have also been met. If the necessary documents are not submitted on time, the student's admission will be retracted.

(4) Applicants who are not admitted will receive a rejection letter that states the reasons for the decision.

(5) The documents submitted for the selection procedure are to be kept until the decision is final; in the case of legal proceedings, they are to be kept until a legally binding decision has been made.

Section 6
Entry into Force

(1) These regulations enter into force on the day following their publication in *FU-Mitteilungen* (the official bulletin of Freie Universität Berlin).

(2) The admission regulations for the master's degree program from February 17, 2022 (*FU-Mitteilungen* 14/2022, p. 363), therefore lapse when the new regulations come into force.

Appendix 1
(to Section 4.4):

Allocation of selection points based on the grade point average as recorded in the documentation for the first university degree in accordance with Section 4.4.

Grade point average	Selection points
1.0	60
1.1	58
1.2	56
1.3	54
1.4	52
1.5	50
1.6	48
1.7	46
1.8	44
1.9	42
2.0	40
2.1	38
2.2	36
2.3	34
2.4	32
2.5	30
2.6	28
2.7	26
2.8	24
2.9	22
3.0	20
3.1	18
3.2	16
3.3	14
3.4	12
3.5	10
3.6	8
3.7	6
3.8	4
3.9	2
4.0	0

Anlage 2

MSc Data Science
Self-indication of admission requirements and selection criteria

Application number:	
Surname/Family name:	
First name/Given name:	
Date of birth:	
Bachelor degree:	
Bachelor University (name and place):	

Admission requirements

1. Language certifcate

Please provide proof of your English language skills at level C1 of the Common European Framework of Reference for Languages (CEFR) e.g. university degree at an education institution where English is the language of instruction, IELTS 5.0, Cambridge Examinations: first certificate, TOEFL paper 500, or computer 170 or internet 80, UNIcert II

2. Academic requirements

Bachelor's degree in Computer Science Yes/No

If you hold a Bachelor's degree in Computer Science, please continue with Selection Criteria. Otherwise, fill in the following fields.

Credits[2] in mathematics

20 ECTS in mathematical courses are required for admission to the MSc Data Science. Of these 20 ECTS, at least 5 ECTS need to be in the area of Linear Algebra or Calculus and at least 5 ECTS need to be in the area of Probability Theory or Statistics. Please indicate the relevant courses in the forms below. Here is an example for the fulfillment of the linear algebra and analysis courses.

Course title[1]:	Institution[2]:	Credit points[3]:
Lineare Algebra I	Freie Universität Berlin, Institut für Mathematik	10 ECTS

[1] Please indicate the title of the course, e.g. "Linear Algebra I", or "Introduction to Linear Algebra for computer scientists", or similarly.
[2] Please indicate the institution that awarded the certificate for the course. If the course was completed at a university, please also indicate the respective department.
[3] Please indicate the number of credits you received for the successful completion of the course and the unit that these credits are measured in, e.g. ECTS

Credit points in Linear Algebra or Calculus
(a minimum of 5 ECTS is required)

Course title	**Institution**	**Credit points**

Credit points in probability theory or statistics
(a minimum of 5 ECTS is required)

Course title	Institution	Credit points

Remaining credit points
(if any, a minimum of 20 ECTS points in mathematical courses is required)

Course title	Institution	Credit points

Computer science and programming

10 ECTS in computer science courses are required for admission to the MSc Data Science. Of these 10 ECTS, at least 5 ECTS need to be in the area of algorithms and at least 5 ECTS need to be acquired in courses on higher programming languages, such as C/C++, Java, or Python,

Credit points in algorithms
(a minimum of 5 ECTS is required)

Course title	Institution	Credit points

Credit points in programming
(a minimum of 5 ECTS in C/C++, Java, or Python is required)

Course title	Institution	Credit points

3. Selection criteria

Theoretical computer science
10 selection points are awarded for proof of at least 15 ECTS in theoretical computer science.

Interdisciplinary data science courses
10 selection points are awarded for proof of at least 15 ECTS in interdisciplinary data science, including cognitive science, digital humanities, and natural sciences.

Research-oriented activities
20 selection points are awarded for proof of a relevant research-oriented activity outside of the regular study program.