BMS PhD Application Guidelines

Dear Applicant,

The BMS Application Guidelines are designed to help you complete your application to the Berlin Mathematical School (BMS), but before you begin, we would like to offer you some encouragement and advice.

We are pleased that you are considering the BMS for your graduate studies. The BMS presents exceptional opportunities and offers students the academic and intellectual resources of three universities. However, before applying for admission, you should find out if the BMS program actually meets your interests and needs. Please make sure that our program has scholars working actively in the mathematical fields that you are interested in.

Consult your professors or any contacts you may already have in Berlin. Browse our website where you will find important information about the BMS study program, current seminars and ongoing activities. Visit the websites of our faculty members and current students. It is in your interest, as well as ours, that the most highly qualified and motivated candidates find the best match at the BMS for their research interests.

Working towards a PhD is more than a continuation of your previous studies. During your graduate education, you will develop the capacity for independent research by working closely with a scholar, or a small group of scholars, whose work can serve as a model for yours. It is a transition period, by the end of which you will become a colleague to your professors. Achieving this requires more than completing courses, accumulating credits and passing prescribed examinations. Such a position is earned by commitment to the difficult, but fulfilling craft of independent research through which you will demonstrate the ability to make an original contribution to knowledge.

Meeting this challenge requires a personal sacrifice of time, leisure and of immediate rewards, but the achievement is well worth the cost in terms of intellectual satisfaction and the opportunity to expand the boundaries of knowledge.

Before resolving to set out on the path to a doctoral degree, please reflect on the commitment that will be required. If you think you have the level of commitment sufficient to sustain you through several years of intense and concentrated work and study, then we very much welcome your application.

Holger Reich (Chair)
Gavril Farkas (Deputy Chair)
John M. Sullivan (Deputy Chair)

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A. GENERAL INFORMATION

Before starting your application, we advise you to read the **BMS Study Regulations** and inform yourself about the requirements of our program. This information can be found at: https://www.math-berlin.de/about-bms/bms-phd-program
The **first round** of the application period for admission in 2024 runs from 15 September to 1 December 2024. The **second round** runs from 1 March to 1 April 2025.

To apply to the BMS doctoral program, you must complete our online application form, which is accessible only via the BMS online application portal. To access the form, **you first have to register on the BMS website**: www.math-berlin.de.

It is not necessary to wait until you have completed your degree before you submit your application, however **you must have completed your degree by the time you start** at the BMS. For example, if you are scheduled to obtain your Bachelor's degree before October, you may apply for Phase I even though you hold no degree at the time of application.

Students wishing to enter Phase I of our program are expected to have a Bachelor's degree or equivalent.
Phase I applicants who want to be considered for a **BMS Phase I Scholarship** must submit an application **by 1 December.**
For those who apply by 1 April, consideration for a Phase I scholarship is not guaranteed, since the amount of Phase I scholarship awards is limited.

Students wishing to enter Phase II of our program are expected to have a Master's degree or an equivalent degree. In addition, all Phase II students must satisfy the usual admission requirements for entry to the PhD program at one of the three universities in Berlin. The university regulations can be found here:
www.math-berlin.de/about-bms/downloads.

Phase II applicants should take note of the following application deadlines before submitting an application:

The **1 December 2024** deadline is for Phase II applicants who want to start at the BMS in April, May, June or July 2025.

The **1 April 2025** deadline is for those Phase II applicants who want to start at the BMS in August, September or October 2025.

Phase II applicants who want to be considered for funding, either in the form of a scholarship or a research position, should indicate that in the online application form. Phase II applicants will be considered for funding regardless of the application round.

B. DOCUMENTS REQUIRED TO APPLY

i. Online Application Form
ii. Special Circumstances (online application form)
iii. Letters of Recommendation (pdf)
iv. Financial Resources (online application form)
v. Personal Statement (pdf)
vi. Curriculum Vitae (pdf)
vii. University Transcripts (pdf)
viii. Proof of Proficiency in English (pdf)
ix. Research Statement - Phase II applicants only (pdf)

Native speakers of German may submit their application in German.

i. **Online Application Form**

The online application form must be fully completed, contain all the required documents listed above, and submitted by the deadline in order for the application to be considered. You may submit **only one application per application period**.

To access the online application form, you first have to register on the BMS website www.math-berlin.de. Once you have registered and logged in, click on "PhD Application" in the left menu bar to access the online application form. Please complete all sections of the form and upload all required documents. If you do not wish to complete the application in one session, or if you plan to attach the required documents later, click the "Save" button and return to it later.

Once you submit your application you will neither be allowed to make any changes, nor upload any further documents to your online file. We therefore recommend that you do the following before submitting your application:

- check that you have filled in the online application form correctly
- make sure that the documents you have chosen to upload are **not** corrupted, **not** password-protected and **no larger** than 1.5 MB each.

As soon as you submit your application, your recommenders will be contacted automatically by the BMS to provide a letter of recommendation for you. It is therefore not possible to change recommenders after submitting your application.

In case of any technical problems with the online form, please contact us at: applications@math-berlin.de.

ii. **Special Circumstances**

The BMS Admissions Committee will take into account any special circumstances that may have affected your academic performance or academic career, including circumstances that caused your studies to take longer than expected or led to an interruption in your academic career. Such circumstances might include illness, disability, maternity/paternity leave, family responsibilities, financial issues, etc.

Any information you provide in this respect will **not** have a negative influence on your application. The aim is to help the committee members to assess your academic performance during the active period of your studies and to explain any gaps in your CV. Please note that you do not need to reveal anything you consider to be highly personal and/or sensitive. Any information you provide is on a voluntary basis.

iii. **Letters of Recommendation**

Two letters of recommendation are required. Your recommenders must be faculty members, professors, or university teachers who know you well and can vouch for your academic and mathematical abilities. Please note that **you should first ask** your potential recommenders if they are willing to provide a recommendation for you **before** you add their personal contact details to your BMS application. Details of what we would like to see in a recommendation letter can be found here:
https://math-berlin.de/application/letter-of-recommendation
In your online application form, you must supply each recommender's name, institution and email address. As soon as you submit your application, both of your recommenders will automatically be sent an email from the BMS with directions on how to proceed. We will also inform them that **the deadline for their letters is one week after the application deadline.** It is your responsibility to remind your recommenders of this fact. Letters received after the deadline may adversely impact the evaluation of your application and hinder your chance of admission.

We do not accept recommendations submitted by the applicants themselves!

iv. **Financial Resources**

We only admit students to our PhD program if their livelihood is financially secured. This can be achieved with a BMS Phase I scholarship, an employment contract in a PhD project or other sources of funding, e.g. from your home country or another scholarship foundation.
Please read more here: https://www.math-berlin.de/students/scholarships

In the online application form you will be asked if you require funding from the BMS to finance your studies. Your answer will not influence the decision on admission. All funding decisions will be based on academic merit.

v. **Personal Statement**

Your personal statement (*letter of motivation*) should be at least **one full page** or at **most two pages long**. It should describe your academic and career plans as well as your motivation and scientific interests.

The BMS embraces diversity. In line with our goal of striving to achieve a gender-balanced student body, we strongly encourage applicants of all genders to write confidently about their achievements.

Make your personal statement stand out:
- by describing your motivation and enthusiasm for mathematics,
- by showing the depth and breadth of your interest in the subject,
- by explaining what inspires you to continue studying math,

- and by demonstrating your commitment and your potential to excel.

When writing your personal statement, make sure you also provide answers to the following questions:
- What are your mathematical interests?
- How, where and when did they develop?
- What mathematical fields are you particularly interested in and why?
- Why do you think the BMS is the right choice for you?
- Which BMS faculty member would you like to work with and why? (Phase II)

Please note that in the online application form under tab “2. Personal Data”, there is an extra field for describing special circumstances, so there is no need to include such information in your personal statement.

Please upload your personal statement as a pdf file to your online application.

vi. **Curriculum Vitae (CV)**

Your curriculum vitae should be no more than two pages in length and list the details of your education to date, together with your personal academic history, including academic credentials, publications, contributions or other significant achievements. Upload your CV as a pdf file to your online application.

vii. **University Transcripts**

You must submit an official transcript from **every** university you have attended. If your transcripts are not in English or German, an **official translation** is required. Please upload also the back of your transcripts if it shows the grading scale. To prevent delays, you should arrange with your university registrar to provide transcripts as soon as possible, or else you may submit preliminary transcripts showing as many grades as possible. Please upload your transcripts as a pdf file to your online application.

viii. **Proof of Proficiency in English**

Applicants whose native language is neither English nor German, and who have **not** completed their formal education in a school, college or university where English was the language of instruction, must submit official proof of their English proficiency in the form of one of these tests:

1. TOEFL (Test of English as a Foreign Language)
   - Internet-Based Test (iBT) minimum score 79
2. IELTS (International English Language Testing System)
   - minimum score of 6.5 in the Academic Test
3. C2 Proficiency / CPE (Cambridge English: Proficiency) <u>or</u>
   C1 Advanced / CAE (Cambridge English: Advanced)
   - minimum score of 180 / Grade C.

Please upload your test result as a pdf file to your online application.
We do not require test results by post. Results more than two years old at the time of application are not valid and will not be considered.

If your native language is neither English nor German, but you **have completed** your formal education at a school, college or university where English is the language of instruction, then you may submit official certification or an official letter from the institution to confirm this. That will suffice as proof of your English proficiency and one of the aforementioned tests will not be required.
If your native language is German, an *Abitur* or a *Matura* grade for English of at least *befriedigend* (or equivalent) will serve as proof of your English proficiency. If you cannot submit a copy of your *Abitur* or *Matura* certificate, or if it does not show a grade for English, then you must submit the result of one of the aforementioned tests.

ix. **Research Statement - Phase II applicants only**

Phase II applicants should already be knowledgeable in their research area and have an idea of whom they would like to work with at the BMS. The research statement should be **at least one page, but maximum two pages long**. It should explain the applicant's ideas with respect to their future dissertation, as well as outline the underlying research project. While applicants should be familiar with the research of potential supervisors, prior contact with our faculty members is not necessary, however the applicant should mention in the research statement who could be a suitable supervisor.

A description of all BMS research areas can be found here:
www.math-berlin.de/academics/rta
and the list of BMS faculty members can be found here:
www.math-berlin.de/bms-faculty.

Please upload your research statement as a pdf file to your online application.

Please note that applications which remain incomplete by the submission deadline will not be considered!

C. ADMISSION DECISIONS

The BMS Admissions Committee evaluates all completed applications after the application deadline. The committee comprises BMS faculty members from the math departments of the three participating universities.

The result of **all applications submitted by 1 December** will be decided by mid-March.

The result of **all Phase I applications submitted by 1 April** will be decided by late June.
The result of **all Phase II applications submitted by 1 April** should be decided by late June but decisions may be delayed in order to formalize the supervising and funding situation.

All applicants will receive notification **by email** about the admission decision, therefore we kindly ask you to refrain from making enquiries about your result. Please also regularly check your spam/ junk folder to make sure you are not missing an email.

Phase II evaluation/ admission process: If the Admissions Committee positively evaluates your application, we will send it to suitable faculty members and ask them if they would be willing to supervise your PhD (possibly after an online interview) and if they have funding sources available. **If they do not have funding but would like to work with you and the Admissions Committee also deems your application excellent enough, you will be considered for a BMS Phase II scholarship.**

The decisions made by the BMS Admission Committee are based on a careful evaluation of the following criteria:

- Has the application been completed according to section B? (Only completed applications containing all required documents will be considered.)
- Do the recommenders see potential in the applicant to complete a PhD and how do the recommenders rank the applicant amongst their cohorts?
- Does the applicant believe they can benefit from the uniqueness of our graduate school and be successful in their studies at the BMS?
- Do the relevant BMS professors have the capacity to supervise the applicant?
- Does the BMS have enough resources in the chosen field to guarantee the completion of the PhD?
- Does the applicant rank in the top 10% of their year? (The BMS converts all grades to the German grading scale according to German Federal Regulations and only the best 40 applications in each of the Phase I and Phase II categories will be considered further.)

D. USEFUL HINTS

1. A well-written personal statement that answers all the points on page six will help your application stand out from the rest. We strongly encourage all applicants to write about their achievements with confidence.
2. To give your recommenders plenty of time to write a letter of recommendation for you, submit your application as early as possible. At least one week prior to the deadline is recommended. However, the submission date has no effect on your evaluation. All applications will be evaluated after the deadline.
3. Language tests should be taken well in advance of the application deadline. It is your responsibility to take a test early enough in order to ensure receipt of your test score by the application deadline.

E. DEGREE

It is the declared goal of each BMS student to obtain a PhD at one of three participating Berlin universities. Upon successful graduation from the BMS study and research program, the BMS will award a certificate to each of its graduates.

F. BMS STUDY PROGRAM

The BMS Program is divided into two phases: **Phase I** is a basic graduate course phase, while **Phase II** is the PhD research phase. For more information see here: https://www.math-berlin.de/about-bms/bms-phd-program.

A list of classes for each semester can be found here:

www.math-berlin.de/academics/courses.

The academic calendar at the BMS is set in accordance with its three supporting universities (*Freie Universität, Humboldt-Universität, Technische Universität*):

Summer semester 2025:	1 Apr 2025 – 30 Sep 2025
Lectures:	15 Apr 2024 – 19 Jul 2025
Winter semester 2025/26:	1 Oct 2025 – 31 Mar 2026
Lectures:	13 Oct 2025 – 14 Feb 2026

H. CONTACT US

The BMS One-Stop Office is your first point of contact for all questions regarding the application and admission process, or regarding the BMS study program. You can contact us by email or call us. We will be happy to answer your questions.

Good luck with your application!

Berlin Mathematical School

https://www.math-berlin.de/contact

H. ADMISSION SCHEDULE

15 September

Start of the first round of the application period for:
- Phase I applicants who want to be considered for a BMS scholarship
- Phase II applicants who will complete their master's degree before 31 March and want to start their PhD studies earlier than October only.

31 October

Proof of proficiency in English must be submitted by 1 December. All non-native English-speaking applicants should arrange to take a language test by 31 October to ensure that their result is available by our deadline.

1 December

First round application deadline. All **Phase I** applicants will be considered for admission and a BMS scholarship. Eligible **Phase II** applicants only will be considered for admission earlier than October. Phase II applications relevant only for an **October start** will be **evaluated in the second round**.

8 December

Deadline for recommenders to submit their letters of recommendation.

31 January

Phase I: Admission decisions or invitations to interviews are emailed to all applicants in order to allow prospective students to participate in the BMS Days and Student Conference from 17-21 February 2025.
Phase II: Applicants who will not be considered further receive a rejection email. Applications which are considered for admission and/ or the BMS

Phase II scholarship are sent to potential supervisors. They might receive invitations to interviews by the potential supervisors.

17-21 February:

Invited applicants participate in the BMS Days and Student Conference during which time they can get to know future professors and classmates, as well as get an impression of the BMS and the mathematical research activities in Berlin.

1 March

Start of the second round of the application period for:
- Phase I applicants who do not need to be considered for a BMS scholarship
- Phase II applicants who will complete their master's degree before 30 September and want to start their PhD studies in October only.
All non-native English-speaking applicants must provide proof of proficiency in English and should have taken a language test by now to ensure that their result is available by the 1 April deadline.

15 March

Final admission decisions are emailed to eligible **first round** applicants by mid-March. Decisions will not be released by any other method. Shortly after the decisions have been announced, an admissions package will be sent to all successful applicants via email.

1 April

Second round application deadline.

8 April

Deadline for recommenders to submit their letters of recommendation.

30 June

Final admission decisions are emailed to **all** remaining applicants by 30 June. Decisions will not be released by any other method. Shortly after the decisions have been announced, an admissions package will be sent to all successful applicants via email.
Please note: There might be delays in final admission decisions for Phase II applicants if the supervising and funding situation cannot be clarified by 30 June. If you have not heard from the BMS at all and do not know what is causing the delay, please do not hesitate to contact us.

1 September

Deadline for submission of final official transcripts and certificates confirming receipt of degree and/or spring/summer coursework.