

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.

John M. Sullivan (Chair)
Jürg Kramer (Deputy Chair)
Holger Reich (Deputy Chair)

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A. GENERAL INFORMATION

The BMS PhD Application Guidelines are designed for applicants who wish to apply to the BMS doctoral program. We hope that you will find them useful when preparing your application. Should anything be missing here that you would like to know about, please let us know by contacting us at the BMS One-Stop Office. We will be happy to answer any questions you may have. Our address and other contact details can be found on the last page of these guidelines.

Before compiling your application materials, we recommend that you read the **BMS Study Regulations** and inform yourself about the requirements of our program. This information can be found at: www.math-berlin.de/students/program-information. The first round of the application period for the academic year 2019/2020 (winter semester 2019 / summer semester 2020) runs from 15 September to 1 December 2018.

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The second round runs from 1 February to 1 March 2019. All applicants who require a scholarship must submit their application by 1 December 2018. Please note that the result of **all Phase II applications** will be decided in late April 2019.

To apply for the BMS PhD Program, you must complete our online application form, which is accessible via the BMS online application portal only. Before you are able to access the form, **you first have to register on the BMS homepage**: www.math-berlin.de.

Students wishing to enter Phase I of our program are expected to have a Bachelor's degree or equivalent. Current mathematics students in their *Hauptstudium* at one of the three Berlin universities can apply for membership to the BMS. For students who are further advanced, part of the Phase I course requirements may be waived.

To enter Phase II, students are expected to have a Master's degree, a German *Diplom* or an equivalent degree. Current BMS Phase I students are required to pass the BMS Qualifying Exam. In addition, all Phase II students must satisfy the usual admission requirements for entry to the PhD program of the Berlin universities. The university regulations can be found here: www.math-berlin.de/about-bms/downloads.

It is not necessary to wait until you have completed your degree before you submit your application, but **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 by 1 October 2019, you may apply for Phase I even though you hold no degree at the time of application. If you are pursuing a Master's degree that will be completed before October 2019, you must apply for Phase II of the BMS PhD Program.

The result of Phase I applications submitted by 1 December will be decided by mid-March, and the result of those submitted by 1 March will be decided by late April. **The result of all Phase II applications**, regardless of the submission deadline, will be decided by late April. You will receive notification by e-mail about the admission decision, therefore we kindly ask you to refrain from making e-mail or telephone enquiries about your result.

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.

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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 academic year.

To access the online application form, you first have to register with the BMS via our homepage 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.

After you submit your application, the BMS will contact your recommenders to ask for a letter of recommendation for you.

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 is asked for in a recommendation letter can be found here: math-berlin.de/application/letter-of-recommendation

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In your online application form, you must supply each recommender's name, institution and e-mail address. As soon as you submit your application, both of your recommenders will automatically be sent an e-mail 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

A short description about financial resources is required from all applicants. Please indicate in the online application form how you will finance your studies by answering the following:

- What steps have you taken to secure funding for your studies?
- Will a scholarship be necessary to enable you to come to BMS?

v. Personal Statement

Your personal statement (*Motivationsschreiben*) 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 and, due to our goal of striving to achieve a student body of 50% female students, we strongly encourage female applicants in particular 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.

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vi. Curriculum Vitae (CV)

Your curriculum vitae (*tabellarischer Lebenslauf*) 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 one official transcript from **every** university or college you have attended. If your transcripts are not in English or German, an **official translation** is also required. To prevent delays, you should arrange with your university registrar to provide transcripts as soon as possible, or else you should 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. CAE (Cambridge English: Advanced)
 - minimum score of 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 from the institution to confirm this. This certification will suffice as proof of your English proficiency and one of the aforementioned tests will not be required.

If your native language is German, your *Abitur* or *Matura* grade (at least *befriedigend* or equivalent) in English 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

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applicant's ideas with respect to his/her future dissertation, as well as outline the underlying research project. While applicants should be familiar with the research of potential supervisors, prior contact with BMS 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. The committee comprises BMS faculty members from the math departments of the three participating universities.

The result of all Phase I applications submitted by 1 December will be decided by mid-March. The result of those submitted by 1 March will be decided by late April.

The result of all Phase II applications, regardless of the submission deadline, will be decided by late April.

All applicants will receive notification by e-mail about the admission decision, therefore we kindly ask you to refrain from making e-mail or telephone enquiries about your result.

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 his/her cohorts?
- Does the applicant believe he/she can benefit from the uniqueness of our graduate school and be successful in his/her 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 his/her 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.)

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D. USEFUL HINTS

1. Applicants who require a scholarship must submit their online application by the first round deadline of 1 December. After that date, only a very limited number of BMS scholarships will remain available.
2. A well-written personal statement that answers all the points on page five will help your application stand out from the rest. We strongly encourage female applicants to write about their achievements with confidence.
3. Submit your application as early as possible! At least one week prior to the deadline is recommended. This will give your recommenders plenty of time to write a letter of recommendation for you.
4. 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 the required test score by the application deadline.
5. In general, the BMS admits new students once a year for entry in October. However, exceptions for highly talented applicants are sometimes possible.

E. ADMISSION SCHEDULE

15 September

Start of the first round of the application period for applicants who wish to be considered for admission and a BMS scholarship.

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 applicants will be considered for admission and a BMS scholarship.

8 December

Deadline for recommenders to submit their letters of recommendation.

31 January

Preliminary admission decisions are e-mailed to first round **Phase I** applicants only in order to allow some prospective Phase I candidates to participate in the BMS Days and Student Conference from 18 - 22 February 2019.

1 February

The second round of the application period begins. A small number of scholarships remain available.

18 - 22 February

Prospective Phase I candidates are invited to 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. The BMS will cover economy class travel and accommodation costs for invited candidates.

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1 March

Second round application deadline: all applicants will be considered for admission, but only a limited number of BMS scholarships will be available.

8 March

Deadline for recommenders to submit their letters of recommendation.

15 March

Final admission decisions are e-mailed to **first round Phase I applicants** by mid-March. Decisions will not be released by any other method. Shortly after the admission decisions have been made, an admissions package will be posted to all successful Phase I applicants. Please allow around 10 business days for receipt of the package.

15 April

Deadline for first round candidates to accept or decline the offer of admission. The "Statement of Acceptance" form in the admissions package must be returned to the BMS by post or e-mail by 15 April.

15 May

Final admission decisions are e-mailed to **second round Phase I applicants and all Phase II applicants** by 15 May. Decisions will not be released by any other method. Shortly after the admission decisions have been made, an admissions package will be posted to all successful applicants. Please allow around 10 business days for receipt of the package.

15 May

Deadline for students admitted in the first round to register for the BMS Buddy Program and the BMS German Language Course.

15 June

Deadline for second round candidates to accept or decline the offer of admission. The "Statement of Acceptance" form in the admissions package must be returned to the BMS by post or e-mail by 15 June.

15 June

Deadline for students admitted in the second round to register for the BMS Buddy Program and the BMS German Language Course.

1 September

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

F. 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.

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G. 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: www.math-berlin.de/students/program-information.

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*):

Winter semester 2019/20:	01 Oct 2019 – 31 Mar 2020
Lectures:	14 Oct 2019 – 15 Feb 2020
Summer semester 2020:	01 Apr 2020 – 30 Sep 2020
Lectures:	14 Apr 2020 – 18 Jul 2020

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 e-mail, call us, or drop by in person. We will be happy to answer your questions.

Good luck with your application!

Berlin Mathematical School

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