Master's (ScM) Degree in Applied Mathematics: Details and Interview Application Form

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Director of Graduate Studies in Applied Mathematics
Revised March 18, 2021

1. Introduction

Although the Division of Applied Mathematics does not offer a Master's program for students from outside of Brown, existing Brown undergraduate and graduate students can earn an ScM in Applied Mathematics in various ways:

Four-Year Concurrent Degree Program: The Four-Year Concurrent Degree Program leads to a Baccalaureate and Master's Degree. This program allows exceptionally capable Brown students to combine their last year or two of undergraduate study with graduate study, resulting in the simultaneous completion of both a Baccalaureate Degree and a Master's Degree.

Fifth Year Master's: Brown undergraduates may be allowed to continue at the University for a Master's Degree after completing their Bachelor's Degrees.

Master's Degree en Route to Ph.D.: Brown Ph.D. students from any discipline can earn an ScM degree in applied mathematics if they satisfy the requirements for the ScM degree. Applied Mathematics Ph.D. students automatically receive an ScM in Applied Mathematics once they satisfy the requirements for the ScM degree. This is subject to the approval of the student's Director of Graduate Studies.

Open Graduate Program: The open graduate program allows Brown Ph.D. students(and provides funding) to pursue an ScM in a different discipline while they work on their Ph.D.

Please note that the Division does not offer a Master's program for students who do not fall into any of the above categories.

Further information on each possibility is given below. However, the information contained in this document is intended to outline the requirements and procedures that are specific to students wishing to take the ScM in Applied Mathematics. These requirements are understood to hold in addition to the general regulations set by the University. As such, this document is non-exhaustive and is intended to be read in conjunction with the more detailed and definitive guidelines presented in the Graduate School Handbook found here: https://www.brown.edu/academics/gradschool/graduate-school-handbook.

2. Requirements

The formal course requirements for obtaining an ScM in Applied Mathematics are:

- A total of 8 courses must be satisfactorily completed
- At least 6 of these must be Applied Mathematics (APMA) courses
- At least 6 of the 8 courses must be taken at the 2000 level
- A maximum of 2 C's are allowed amongst the 8 courses

Please note that:

- Research courses such as APMA 2980 and 2990 are not accepted for fulfillment of requirements.
- In rare circumstances, a topics course may be acceptable provided it is deemed suitable by the Director of Graduate Studies. At the very least, the courses must meet regularly, have regular homework assignments and examinations.
- Courses taken on a satisfactory/no credit basis (S/NC) may not be counted towards fulfillment of the requirements.

3. Financial Support

The Division of Applied Mathematics does not provide financial support for undergraduate students wishing to undertake studies towards an ScM in Applied Mathematics. Undergraduate financial-aid awards do not extend into graduate school.

Graduate students entering through the Open Graduate Program receive funding from the University. Visit this link for details: https://www.brown.edu/academics/gradschool/opengraduateeducation.

4. Four-Year Concurrent Degree Program Leading to Baccalaureate and Master's Degree

This program allows exceptionally capable students to combine their last year or two of undergraduate study with graduate study, resulting in the simultaneous completion of both a Baccalaureate Degree and a Master's Degree. Students apply to the program during the junior year and no later than the end of their 6th semester. Up to two courses counted towards the undergraduate concentration may be used to fulfill the requirements of the graduate degree.

Applications are made to the Committee on Academic Standing, but before an application is submitted, it must be approved by the Division of Applied Mathematics and the Graduate Council. The minimum requirements for obtaining approval from the Division of Applied Mathematics include:

- Support from the Director of Graduate Studies. The DGS will be the faculty member in Applied Mathematics who will supervise your graduate program. Please note that the graduate component of the course will be based on results obtained in courses. We do not offer an option to undertake research towards a Master's thesis.
- A strong performance (normally grade A) in *MATH 1010 Analysis: Functions of One Variable or MATH 1130/1140 Functions of Several Variables*. Experience shows that students who are

unable to meet this requirement find great difficulty tackling the graduate level APMA courses needed to fulfill the ScM requirements.

The Graduate School imposes additional requirements on those wishing to undertake the Concurrent Degree Program. Further details can be found at the Graduate School website: https://www.brown.edu/academics/gradschool/undergraduate/concurrent-bachelorsmasters-degrees .

5. Fifth Year Master's

The 5th-Year Master's Degree option allows Brown undergraduates to continue at the University for a Master's Degree after completing their Bachelor's Degrees.

Students must apply for admission to the Fifth Year Master's program before they complete their undergraduate studies. Admission must be approved by the Director of Graduate Studies and by the Graduate School. While a student must be enrolled as an active undergraduate student at the time of application, admission to the graduate program can be deferred for up to two years with the approval of the DGS.

The minimum requirements for consideration for entry to the Fifth Year Master's program in Applied Mathematics are:

- Permission from the Director of Graduate Studies. The DGS will be the faculty member in Applied Mathematics who will supervise your graduate program.
- A strong performance (normally grade A) in *MATH 1010 Analysis: Functions of One Variable or MATH 1130/1140 Functions of Several Variables*. Experience shows that students who are unable to meet this requirement find great difficulty tackling the graduate level APMA courses needed to fulfill the ScM requirements.

Further information regarding the Fifth Year Master's program can be found at the Graduate school website: https://www.brown.edu/academics/gradschool/fifth-year .

6. Open Graduate Program

The University's Graduate School offers a small group of Ph.D. students from any discipline the opportunity to pursue a Master's degree in a secondary field.

There is no constraint on the primary field, which may be either close to or quite far removed from Applied Mathematics. However, studying Applied Mathematics should be cognate to the candidate's primary research topic. Admission to this program is by application only, using forms provided by the Graduate School.

It is a University regulation that a student applying to take the Master's component in Applied Mathematics must be supported by the Director of Graduate Studies in Applied Mathematics. In particular, this requires that the applicant has undergraduate credentials that support an expectation of success in the Applied Mathematics program.

Further information on the program can be found at the Graduate School website: https://www.brown.edu/academics/gradschool/opengraduateeducation/open-graduate-education-information-prospective-applicants .

7. I am interested. How should I proceed from here?

Prospective students *must:*

- Complete an interview form (found in the Appendix);
- Contact the Director of Graduate Studies via email attaching the completed form, a transcript and your proposed course plan. An appointment will be set up to meet with the DGS to discuss the application.

All being well, following the meeting, you would then formally apply to our Master's program through the Graduate School's online application portal.

Revised March 18, 2021

Appendix A. ScM in Applied Mathematics Pre-Interview Form

Name	
Email	
Concentration	
Graduation Year	

Performance in prerequisites courses:

Year/Sem	Grade	Code	Instructor	Title
		MATH 1010		Analysis: Functions of One Variable
		MATH 1130/1140		Functions of Several Variables

Two professors who have agreed to provide recommendation letters:

	Name	Email	Department
1			
2			

Courses which you propose to take/offer for the ScM in Applied Mathematics

Year/Sem	Grade	Code	Instructor	Title

__I wish to apply to take the above courses towards the ScM in Applied Mathematics
__The above courses meet the requirements for the ScM in Applied Mathematics
__I have attached a complete unofficial transcript.
__I have attached the following additional documents (if required by the DGS)

Signature: Date:

Please send the completed form to Professor Chi-Wang Shu, Director of Graduate Studies, Division of Applied Mathematics, Brown University, Providence, RI 02912. Email address: Chi-Wang Shu@Brown.edu. A meeting will then be arranged to discuss your application.