MS in Applied Mathematics

Admission Contact Information
Stephen Montgomery-Smith, Director of Graduate Studies
222 Mathematical Sciences Building
Columbia, MO 65211
(573) 882-6221
email: muasmathdgs@missouri.edu

Admission Criteria

Notes: Applicants for any graduate degree in mathematics should submit an application for graduate study. Admission to the graduate program does NOT guarantee admission to the Ph.D. program. International Applicants applying from outside North America who seek financial support from the Department will only be considered for the PhD program.

Fall deadline: January 15

• While a bachelor’s degree from an accredited institution is required, the undergraduate major need not be mathematics as long as applicants have had sufficient mathematics training to qualify for 8000-level courses during the first three semesters of graduate work.
• Minimum TOEFL scores:

<table>
<thead>
<tr>
<th>Internet-based test (iBT)</th>
<th>Paper-based test (PBT)</th>
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</thead>
<tbody>
<tr>
<td>61 Effective July 1, 2015 must have</td>
<td>500 Effective July 1, 2015 must</td>
</tr>
<tr>
<td>score of 80</td>
<td>have score of 80</td>
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</table>

Important Notes: International applicants seeking departmental support are required to have a minimum TOEFL score of 85 (Internet-based test) or equivalent. An ibtTOEFL Speaking subscore of 22 or higher is preferred.

• Minimum total academic IELTS score is 5.5

Required Application Materials

• 3 or more letters of recommendation from your professors or persons who assess in detail your academic performance and potential.
• Transcripts
• Personal Statement
• GRE scores (required for PhD application, strongly recommended for Masters application)
• TOEFL or IELTS (International students only)

Note: The application is submitted through the Office of Graduate Studies’ ApplyYourself system. This includes the online credit card payment $55.00 US for U.S. Citizens and Permanent Residents, $75.00 US for Non-Resident International applicants.

Completing the ApplyYourself Application:

This section consists of four subsections.

• Personal Information: Complete all information as requested.
• Application Information: Applications are considered only starting Fall Semester, and only for Full-time study. Select a degree from the Graduate Degrees offered by the MU Mathematics Department.
• Indicate your selection for the Applied master of Mathematics Master of Arts (MS)
  • Admissions Category: Graduate Degree Sought at MU: Master’s
  • Graduate Program to which you are seeking admissions: Applied Mathematics Master of Science (MS)
• Educational History: Complete all information as requested.
• Test Information:
  • The GRE General Test is required for application to the PhD program in Mathematics, and are strongly recommended for Masters applicants. GRE General Test scores sent directly from the ETS will be considered as part of an application if available. The GRE Subject Test is not required, will be considered if submitted.
  • MU’s Institutional Code for the GRE is: 6875.
  • MU’s Institutional Code for the TOEFL is: 6875.

Supplemental Information:

• (required) Upload your Personal Statement, Statement of Goals or Statement of Purpose.
• Please indicate the specific degree for which you are applying, any additional degrees for which you may later apply, and explain your reasons for choosing to pursue these degrees at the University of Missouri. Note that admissions criteria for the PhD are more stringent than for the Master’s. MU PhD students can later add a Master’s degree to their program of study without requiring departmental approval. MU Master’s students who wish to later add the PhD to their program of study require departmental evaluation and approval.
• (optional) Upload your résumé or curriculum vita.
• (optional) Upload your writing sample.
• You may submit samples of your mathematical writings, publications, or pre-prints. Please limit to 10 pages.
• (optional) Upload any other supporting documents
• Unofficial copies of transcripts uploaded by applicant can be used for initial evaluation- official transcripts sent directly to the Graduate Admissions Office will still be required to finalize admission
• Unofficial copies of GRE reports uploaded by applicant can be used for initial evaluation
• (optional) Upload any other supporting documents

RECOMMENDATIONS: The ApplyYourself (https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=umc-grad) system will let you request confidential online recommendation letters from your recommendation providers. You need to provide the names and email addresses of recommendation providers who have agreed in advance to write letters for you. The Mathematics Department application requires at least three recommendation letters from your professors (or persons who assess in detail your academic performance and potential).

MS Degree Completion Requirements

Designed to give students training in those areas of mathematics used frequently in applications.

A candidate must satisfactorily complete 30 hours of approved course work, at least 15 hours of which must be in 8000-level courses.
### MS in Applied Mathematics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 8420</td>
<td>Theory of Functions of Real Variables I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 8440</td>
<td>Advanced Ordinary Differential Equations I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 8190</td>
<td>Masters Project in Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MATH 8090</td>
<td>Master's Thesis Research in Mathematics</td>
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Suggested Courses:
- MATH 8445: Partial Differential Equations I (3)
- MATH 8480: Advanced Probability (3)

At least three hours of the 30 hours must be taken outside the department. Additional requirements (some of which may be satisfied by work done as an undergraduate) include the completion of one year of advanced calculus and at least one approved course in each of the areas of linear algebra, numerical analysis and mathematical statistics or probability.

**Students may not list the courses:**
- MATH 7110: Advanced Calculus With Applications (3)
- MATH 7100: Differential Equations (3)
- MATH 7140: Matrix Theory (3)
- MATH 7150: History of Mathematics (3)

*The successful completion of a Master’s Project (MATH 8190) or Master’s Thesis (MATH 8090) must be certified by a Master’s Committee consisting of three members of the Mathematics regular faculty.*

The following table lists the requirements for the MS, and also suggests an order in which to take courses.

### First Year

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<thead>
<tr>
<th>Fall</th>
<th>CR</th>
<th>Spring</th>
<th>CR</th>
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</thead>
<tbody>
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<td>MATH 7700</td>
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<td>MATH 7900</td>
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<td>MATH 7940</td>
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### Second Year

<table>
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<th>Spring</th>
<th>CR</th>
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<tbody>
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<tr>
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<td>Masters Project</td>
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**Total Credits: 18**