

Mathematics MS

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Mathematics.

About the Program

The Department of Mathematics offers graduate work leading to the Master of Science degree. The aim of the MS program is to provide students with a foundation sufficient to pursue careers in mathematics in industry, government or education. The program offers opportunities to conduct original research under the supervision of a faculty member.

Time Limit for Degree Completion: 3 years

Campus Location: Main

Full-Time/Part-Time Status: Students complete the degree program through classes offered before 4:30 p.m. The degree program can be completed on a full- or part-time basis.

Interdisciplinary Study: The program encourages interdisciplinary coursework, research and interactions among faculty and students with interest in computer and information sciences, physical and life sciences, statistics and engineering.

Affiliation(s): The Mathematics program at Temple University is affiliated with the American Mathematical Society and the Mathematical Association of America.

Study Abroad: Department faculty are active internationally and sometimes travel overseas for conferences and extended research visits. In some cases, students may participate in these activities.

Accreditation: This program adheres to accepted professional standards of mathematics education and research.

Areas of Specialization: The department has approximately 25 faculty members actively involved in research and graduate education. With a graduate student body of less than 40, we are a program of moderate size with a high faculty/student ratio. Thus, we provide students with unique opportunities for flexible program design and ample interaction with faculty. Classes are small and are held in an informal atmosphere enabling students and faculty to work closely together.

The department offers a great variety of choices for areas of specialization. A strong research presence exists in the following areas: algebra, computational mathematics, differential geometry and topology, geometric group theory, global geometry, harmonic analysis, invariant theory, mathematical biology, mathematical physics, mathematics of materials, numerical analysis, partial differential equations, probability, representation theory and several complex variables. Both prospective and matriculated students are encouraged to browse faculty webpages and contact faculty directly for more detailed information regarding areas of specialization and opportunities for further research.

Job Prospects: Graduates either continue advanced educational programs or pursue employment in industry, education, or government laboratories and agencies.

Non-Matriculated Student Policy: Non-matriculated students must coordinate coursework with the Graduate Chair.

Financing Opportunities: Teaching Assistants teach basic undergraduate mathematics courses, ranging from remedial courses through calculus. The standard teaching load is 20 hours per term. In determining the load, credit is given for more difficult and challenging teaching assignments. Research Assistantships are sometimes available, typically through special projects and grants. Support generally includes a stipend and tuition of up to 9 credits per term.

Admission Requirements and Deadlines

Application Deadline:

Fall Priority Deadline: March 1

Applications submitted after the priority deadline will be considered for admission on a rolling basis.

APPLY ONLINE to this graduate program.

Letters of Reference:

Number Required: 3

From Whom: Letters of recommendation should be obtained from individuals who are well acquainted with the applicant's abilities and achievements in mathematics and related areas, particularly former instructors of mathematics courses and projects. Letters from instructors in related areas such

as computation or the physical and life sciences are also appropriate. In certain cases, letters from employment supervisors or project leaders may be appropriate as well.

Coursework Required for Admission Consideration: Applicants must have completed fundamental undergraduate mathematics courses.

Bachelor's Degree in Discipline/Related Discipline: All applicants must hold a baccalaureate degree from an accredited college or university.

Statement of Goals: Describe your strengths and motivation, the purpose for applying to a graduate program in mathematics, and why you are interested in the intended degree. This forum should be used to make your strongest case for admission and, thus, should be well written.

Standardized Test Scores:

GRE General Test or GRE Subject Test in Mathematics: The GRE General Test is not required and will not be considered. The GRE Subject Test in Mathematics is optional.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

Test Waivers: An applicant who wants to have certain admission requirements waived must contact the department directly. Requests are considered by the department on a case-by-case basis. In some cases, an additional appeal to the Graduate School may be required. In such a case, the department makes a preliminary determination for the applicant and, if positive, issues a supporting letter to the Graduate School on the applicant's behalf.

Resume: Current resume required.

Transfer Credit: Students who have taken graduate courses at other institutions or at Temple University prior to matriculation may apply for transfer credit. All applications for transfer credit are reviewed by the Graduate Committee, which has the option to deny credit if the courses involved are deemed substantially inferior to similar courses offered by the Department of Mathematics. The credits must be equivalent to coursework offered at Temple, with a grade of "B" or better having been earned in the course(s). No course completed more than five years before the date of application will be awarded credit, nor will courses substantially similar to courses taken since matriculation earn transfer credit. Transfer credit is only available for graduate-level courses in mathematics or those in related fields that have a substantial mathematical content. Applications for transfer credit are not considered until the student has completed at least three graduate courses totaling at least 9 credits. The maximum number of transfer credits awarded is 6.

Program Requirements

General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

The Master of Science degree requires 10 graduate courses at the 5000 level or higher. The program of study must be designed in coordination with a Mathematics faculty advisor and approved by the departmental Graduate Committee. With the approval of the faculty advisor and Graduate Committee, relevant courses from departments other than Mathematics may be included.

The MS degree is offered with an optional concentration in Applied and Computational Mathematics. The concentration is designed for students interested in incorporating advanced study in mathematical and computational methods into the Master of Science program. Students pursuing this concentration complete at least 15 credits of coursework in applied and computational mathematics within their 30-credit degree program.

Culminating Events:

After satisfying the 30-credit course requirement, students may choose between the following three options as the culminating event for the MS degree:

- Master's Thesis
- Master's Comprehensive Examination
- Master's Pass on the PhD Comprehensive Examination

Master's Thesis:

Students who choose to submit a master's thesis must select a faculty advisor and a thesis advisory committee. These arrangements are subject to the approval of the Mathematics Graduate Committee. The date, time and location of a thesis defense are set by the Graduate Chair in consultation with the student's advisory committee.

Master's Comprehensive Examination:

For students selecting this option, a written Master's Comprehensive Examination is composed by at least two departmental Graduate Faculty. The topics covered should correspond to the student's program of study as approved by the Graduate Committee. The exam is graded by at least two Mathematics faculty members, with grades of either Pass or Fail. Students interested in taking the Master's Comprehensive Examination are required to make a written request to the Graduate Chair at least four weeks in advance. If the examination is failed, it may be taken again once, or the student may attempt a master's pass on the PhD Comprehensive Examination.

Master's Pass on the PhD Comprehensive Examination:

Students choosing this option must take three of the separate 25-point sections of the written PhD Comprehensive Examination. A student who achieves a total score of at least 40 on the three sections of the examination, with no individual section score below 8, obtains a master's pass on the exam and has fulfilled the examination requirement for the MS degree. If one of the individual exam scores falls below 8 points, that exam may be repeated once, or the exam in a different topic may be attempted once, or the student may take the Master's Comprehensive Examination described above. Such arrangements are subject to approval by the Graduate Committee. The case of a student failing the comprehensive exam by a small margin is discussed by the department's Graduate Committee, which takes the student's whole academic record into account in its decision.

Contacts

Program Web Address:

<https://www.temple.edu/academics/degree-programs/mathematics-ms-st-math-ms>

Department Information:

Dept. of Mathematics
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1805 N. Broad Street
Philadelphia, PA 19122-6094
grad.math@temple.edu
215-204-7842

Submission Address for Application Materials:

<https://cst.temple.edu/academics/graduate-programs/apply-now>

Department Contacts:

Graduate Chairperson:

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