# MATHEMATICS (MATH)

Graduate Degree Program
College: Computer, Mathematical, and Natural Sciences

## Abstract

Three programs are currently closely affiliated with the Mathematics Department: the Mathematics Program (MATH), the Applied Mathematics & Statistics, and Scientific Computation Program (AMSC), and the Mathematical Statistics Program (STAT). Students applying for admission should use the appropriate symbol to indicate their program of interest. The interdisciplinary Applied Mathematics & Statistics, and Scientific Computation Program offers three concentrations, one in Applied Mathematics, one in Scientific Computation, and one in Applied Statistics. The Statistics Program is concerned with mathematical statistics and probability. The AMSC and STAT programs are described in detail elsewhere in this catalog.

Students can earn a Doctor of Philosophy degree in the Mathematics Program. **The Master's degree is not offered** unless it is en route to a Ph.D. The master's degree is not required for entrance to the Ph.D. program.

The Mathematics Program offers graduate programs in Algebra and Algebraic Geometry, Complex Analysis, Dynamical Systems and Chaos, Geometry, Harmonic Analysis, Mathematical Logic, Number Theory, Numerical Analysis, Ordinary Differential Equations, Partial Differential Equations, Probability, Real and Functional Analysis, Representation Theory, Statistics and Topology.

## Financial Assistance

The MATH program is expecting to support about 12 new doctoral students each Fall. Offers of support are generally made for up five, possibly six years, contingent on the student making satisfactory academic progress. Except for unusual circumstances, offers of financial aid will not be made to applicants seeking a Master's degree. The normal teaching load is four to six hours per week of classroom teaching in addition to the duties of meeting with students and grading papers. Sometimes fellowships and research assistantships are also available.

## Contact

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**Website:** http://www-math.umd.edu

**Courses:** MATH (https://academiccatalog.umd.edu/graduate/courses/math/)

**Relationships:** Applied Mathematics & Statistics, and Scientific Computation (AMSC)  (https://academiccatalog.umd.edu/graduate/programs/applied-mathematics-statistics-scientific-computation-amsc/)

Mathematical Statistics (STAT) (https://academiccatalog.umd.edu/graduate/programs/mathematical-statistics-stat/)

## ADMISSIONS

### General Requirements

- Statement of Purpose
- Transcript(s)
- TOEFL/IELTS/PTE (international graduate students (https://gradschool.umd.edu/admissions/english-language-proficiency-requirements/)): TOEFL/IELTS required even if eligible for waiver.

### Program-Specific Requirements

- Letters of Recommendation (3)
- Graduate Record Examination (GRE) (optional)
- GRE Subject (Math) (Optional)
- CV/Resume
- Supplementary Application (https://gradschool.umd.edu/sites/default/files/2023-06/umdsupplementaryapplicationmathandstat2022%20%281%29.pdf)
- Writing Sample (optional)
- Advanced Textbooks (section of application)

For more admissions information or to apply to the program, please visit our Graduate School website: www.gradschool.umd.edu/admissions (https://gradschool.umd.edu/admissions/)

### Application Deadlines

| Type of Applicant | Fall Deadline |
| --- | --- |
| **Domestic Applicants** | |
| US Citizens and Permanent Residents | December 10, 2025 |
| **International Applicants** | |
| F (student) or J (exchange visitor) visas; A, E, G, H, I and L visas and immigrants | December 10, 2025 |

**Other Deadlines:** Please visit the program website at http://www-math.umd.edu

## REQUIREMENTS

- Mathematics, Doctor of Philosophy (Ph.D.) (https://academiccatalog.umd.edu/graduate/programs/mathematics-math/mathematics-phd/)
- Mathematics, Master of Arts (M.A.) (https://academiccatalog.umd.edu/graduate/programs/mathematics-math/mathematics-ma/)

## FACILITIES AND SPECIAL RESOURCES

The Department is actively involved in research in a number of areas, strengthened further by a complement of mathematicians from the Institute for Physical Science and Technology. The Department fosters a lively program of seminars and colloquia; about half of these talks are given by outside specialists. In addition the department has a tradition of

hosting distinguished long term visitors who give series of seminar talks or teach semester long courses.

The Engineering and Physical Sciences Library is located on the ground floor of the Mathematics Building and contains more than 95,000 volumes in mathematics, physics and engineering, and more than 280 journals in pure and applied mathematics. The Library of Congress, with its extensive collection of books and technical reports, is only a half hour from campus.

The Department has a large network of computers mostly running Linux. The Department houses a computer classroom and a Mathematical Visualization Lab, and similar labs are scattered across campus. There are computers in almost all graduate student offices, and many of the other computers on campus are available for student use.

The Department cooperates closely with the Institute for Physical Science and Technology and with the Department of Computer Science. Faculty members of both groups offer courses in the Department. Computer facilities are available to serve the research needs of both faculty and graduate students. Members of the Department participate actively in the interdisciplinary AMSC Program, and they also staff the Mathematical Statistics Program.