



MASSACHUSETTS INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MATHEMATICS
77 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02139

William P. Minicozzi II
Singer Professor of Mathematics
Associate Head

Tel (617) 253-3299
Fax (617) 253-4358
minicozz@math.mit.edu

April 5, 2024

Dear Prospective Students:

We would like to share with you some basic information about MIT's undergraduate major in mathematics.

1. Flexibility. Mathematics is the largest major in the School of Science and the second largest major at MIT, with approximately 500 students. Math majors are a diverse group in which you are likely to find other students with interests and ambitions similar to your own. We have degree options in pure mathematics, applied mathematics, and mathematics with computer science. Many of our students are double majors, taking second degrees in a variety of subjects, including Electrical Engineering and Computer Science, Physics and Economics. Our majors pursue many different directions after graduation, in either academia or the private sector. While the statistics vary from year to year, they generally look something like this:

- 20% graduate school in mathematics
- 30% graduate school in other (e.g. Computer Science, Physics, Economics, Engineering)
- 20% financial sector
- 10% consulting
- 10% software engineering
- 10% other (e.g. law school, medical school, travel, work for a non-profit)

2. Academic excellence. We are privileged to have the strongest and most decorated group of math majors in the country. Our students do extremely well when applying to graduate schools, both in mathematics and in other areas, our students are extremely successful with undergraduate research, and MIT dominates the national Putnam mathematical competition. For the fourth time in the history of the annual William Lowell Putnam Mathematical Competition, and for the fourth year in a row, all five of the top spots in the contest, known as Putnam Fellows, came from a single school — MIT. Beyond the top 5 scorers, MIT students took 8 of the next 11 spots and 7 of the next 10 after that. MIT was again the winning team, and the “Elizabeth Lowell Putnam Prize” (the highest scoring women) again went to an MIT student. An MIT student often wins the Mathematical Association of America’s Morgan Prize for undergraduate research. Recently, a number of our undergraduate women have been awarded, or received honorable mention for,

the Alice T. Schafer Prize for Excellence in Mathematics.

3. Freedom in course selection. The choice of courses is extremely flexible, reflecting the breadth of interests of our students and faculty. Some students take 18.01 or 18.02 in their first semester at MIT. Some students start with more advanced courses, in analysis (18.100) or algebra (18.700 or 18.701). Whatever the entry point, students can quickly advance to higher-level courses in number theory, algorithms, physical applied math, combinatorics, topology, differential equations, functional analysis, algebraic geometry, and many other subjects. It is not unusual for students to take at least one graduate course in the their time here. All MIT undergraduates are required to take two courses in their major with a focus on communication. The Mathematics Department has the broadest selection of such Communication Intensive (CI) courses of any major. Some header courses in the department have CI versions: 18.100P and 18.100Q, Analysis and 18.200, Introduction to Discrete Applied Mathematics (which is popular with students interested in computing). We also offer CI courses in the form of Undergraduate Seminars, roughly ten of which cover a wide range of subjects, and give our students valuable experience in the written and spoken expression of mathematics.

4. Community. We are very tremendously fortunate to have a large, active, broad, and welcoming community of extraordinary students in mathematics. There are many opportunities for engagement, many opportunities to grade or serve as an undergraduate assistant in the department, and very active student groups including the Undergraduate Math Association, the Council on Math Majors, and the Undergraduate Society of Women in Mathematics. We also host two weekly undergraduate teas and many other events for majors.

5. Our faculty. MIT's Department of Mathematics is often ranked first among graduate programs in the country. Its faculty and graduate students conduct research of the highest caliber. Undergraduates may share in the excitement of this cutting-edge research through both their courses and through contact with their faculty advisor. They may contribute to our departmental research efforts through the Undergraduate Research Opportunities Program (UROP), as well as a number of other research programs such as the SPUR summer program.

We are delighted that you are considering a major in mathematics. The Mathematics Academic Services Office in 2-110 is an excellent resource, so please feel free to contact them for further information.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'W' followed by a long horizontal line that ends in a small upward tick.

William P. Minicozzi II