

## Recommended courses for future math teachers

There is no formal Education track within the math major, but here are some recommendations developed by the Math and Education faculty.

The requirements for the math BA (details available [here](#)) include one course in Algebra, one course in Analysis, and one course in Geometry, as well as a pairing of two related courses. We recommend that within this, future math teachers aim for a broad mathematical background, including Statistics and including several proof-based courses. (Proof-based courses are where you learn to express your mathematical ideas clearly, so they're particularly important for teachers.)

For the pairing, we recommend Probability and Statistics (Math 447 and 448).

For the Analysis course, we recommend future teachers choose from Differential Equations, Dynamical Systems, Complex Analysis, and (for those interested in a rigorous examination of Calculus) Real Analysis.

For the Algebra course, we recommend future teachers choose from Modern Algebra 1 and Number Theory.

For the Geometry course, we recommend future teachers choose from Differential Geometry and Foundations of Geometry.

For additional breadth, we recommend future teachers take a combinatorics course: either Combinatorics or Graph Theory

Students are strongly advised to take Calculus courses as early as possible, since these are prerequisites for many later courses, and to take Math 330 in the sophomore year, since Math 330 is a prerequisite to all other proof-based courses. Beyond that, there are many good ways to fit these recommended courses into four years: here is a sample schedule.

Year	Fall	Spring
1	Calculus 1 (Math 224 and 225)	Calculus 2 (Math 226 and 227)
2	Calculus 3 (Math 323), Math 330	Linear Algebra (Math 304)
3	Probability (Math 447), Algebra course	Statistics (Math 448), Analysis course
4	Geometry course or Combinatorics (Math 386)	Geometry course or Graph Theory (Math 381)

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