

# Department of Mathematics: where students really count!

## The Road to Mathematics

The road to mathematics is by no means unique, and the motivations to choose one's own path to mathematics can vary widely.

Mathematics has the reputation of being extremely hard and elitist; this reputation is one the reasons why many people never venture down that road. Learning mathematics requires work and dedication: the rewards of the discipline are not immediate. Many find that until they have spent the time and effort learn its rules and language, the beauty of the discipline will keep escaping them. However, individuals who put in the effort are often richly rewarded.

## Opportunities for Majors

Probably there has not been a better time for math majors than the present one. Graduate schools in mathematics might be the natural next step for those who want to deepen their understanding of the fine points of the discipline and explore how to apply it. The number of degree options continues to increase, comprising concentrations specifically designed for people who do not intend to remain in academia, responding to the industry's request for more mathematically educated workforce

## Areas of Research

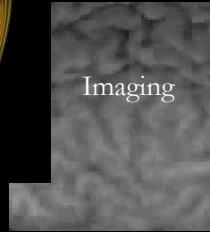
Scientific Computing



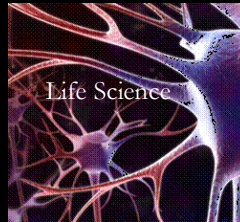
Dynamical Systems



Imaging



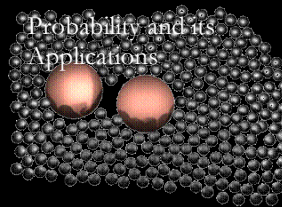
Life Science



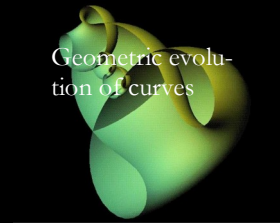
Complex and High Dimensional Phenomena



Probability and its Applications



Geometric evolution of curves



## New Partnerships

Whether you decide to pursue the traditional or the applied mathematics major, the curriculum leaves enough flexibility to follow courses in other disciplines which complement and enrich your education in the way that is most suited to your needs and interests. Recently, in addition to the traditional combination of mathematics and physics, or mathematics and computer sciences, mathematics has been flanked by philosophy, economics, psychology, cognitive science and theater.

## Degree Options

### B.A. in Mathematics

This degree requires at least 38 hours of mathematics courses.

### B.S. in Mathematics

This degree requires at least 50 hours of mathematics courses

### B.S. in Mathematics and Physics

This degree is for students who wish to pursue a dual degree in both disciplines. Intense and challenging.

### B.S. in Applied Mathematics

This degree requires at least 50 hours of mathematics courses and four approved electives specific to the area of application.

### B.A. with Teaching Certification

This program is joint with John Carroll University

### B.S./M.S. in Applied Mathematics

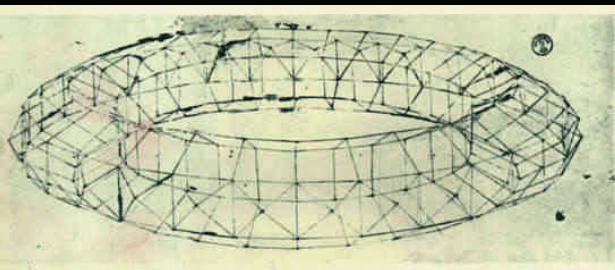
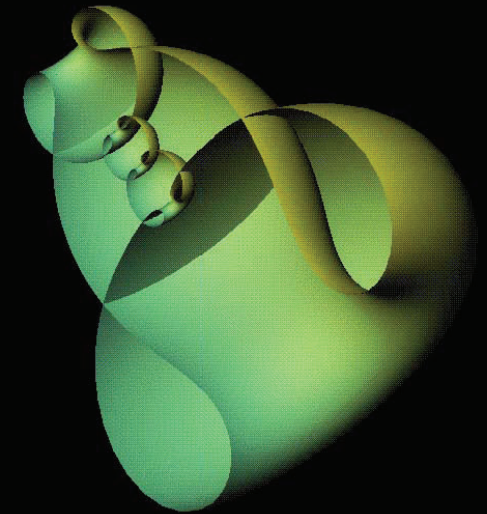
Some of the tracks offer the possibility of an integrated five year study leading to a B.S. in Mathematics and an M.S. in the area of application.



CASE WESTERN RESERVE  
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*The Department of Mathematics at Case Western Reserve University offers a range of undergraduate programs to fit different tastes for mathematics. In addition to a BA and BS in Mathematics, we offer a BS in Applied Mathematics that shows students how and where mathematics is essential for other areas. For students who wish to go a little further in the discipline, there are several BS/MS options in which the BS in Mathematics or Applied Mathematics can be combined with an MS in Mathematics, Applied Mathematics or in another discipline.*

*The rich research programs of the faculty provide many opportunities for students to get involved with interesting projects.*



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## Department of Mathematics

Undergraduate Program