



ABOUT THE PROGRAM

As our world becomes more technological, mathematics plays a central role in understanding society. Sophisticated mathematics is essential to the natural sciences, ecology, economics, and our commercial and technical life.

Mathematics is, at the same time, a subject of great depth and beauty, which the major attempts to make manifest.

The undergraduate program introduces students to fundamental fields of mathematics — algebra, analysis, geometry and topology — and to the habit of mathematical thought. Mathematics majors may go on to graduate school, scientific research, finance, actuarial science or mathematics teaching, but many choose the major for its inherent interest.

What makes the program distinctive?

The Department of Mathematics at Brandeis combines the informality, flexibility and general friendliness of a small department with the intellec-

tual vigor of a faculty whose research accomplishments have placed it among the top departments in the country.

FAST FACTS

Current number of majors and minors: 107

Number of faculty: 15

Can you minor in this program? Yes

Emphasis within the major: algebra, analysis, combinatorics, mathematical physics, number theory, topology

Popular second majors: computer science, economics, physics

Website: www.math.brandeis.edu

ACADEMICS AND RESEARCH

Course offerings

In many Brandeis courses, faculty members often will be in the audience with students lecturing. The result is an active dialogue among all members of the department and a general air of creative mathematics. The mathematics curriculum includes courses in calculus, linear algebra, abstract algebra, real and complex analysis, topology, differential geometry, differential equations, number theory, combinatorics, statistics and probability theory.

Research activities

The faculty members of the mathematics department have diverse interests, including areas in the interface of multiple disciplines. Deep problems in geometry and number theory often are tackled with insights from group theory and analysis, as well as physics. Advanced tools from algebra are brought to bear on important and long-standing questions in knot theory and combinatorics. Students also have ample opportunities to engage in faculty-supervised research projects.

BEYOND THE CLASSROOM

Undergraduate department representatives (UDRs)

One or two UDRs are elected each year among our senior mathematics majors to be a voice for the mathematics student community at Brandeis. They help organize interdisciplinary lectures, student seminars, department parties and other social events. Each December, our mathematics majors also participate in the famed annual William Lowell Putnam Mathematics Competition. Department faculty members run weekly training sessions in the fall to prepare the participating majors for this competition.

AWARDS AND RECOGNITION

Distinguished faculty

Professor Joël Bellaïche has been awarded the prestigious one-year American Mathematical Society Centennial Fellowship for 2010–11 for research in mathematics. The primary selection criterion for this fellowship is the excellence of the candidate's research. In recent years, Professor Dmitry Kleinbock was awarded a Sloan Fellowship, and Professor Bong Lian was awarded a Guggenheim Fellowship.

Grant recognition

The Department of Education has awarded the Brandeis mathematics department a three-year Graduate Assistantships in Areas of National Need grant. The grant, totaling more than \$750,000, will fund fellowships for eligible graduate students in the department.

AFTER BRANDEIS

Graduate programs

The Ph.D. program in mathematics at Brandeis is fairly small and highly selective, and it is designed primarily to lead to the Ph.D. in pure mathematics. Brandeis also offers a master of arts degree and a postbaccalaureate certificate in mathematics.

Diverse career fields

Recent Brandeis graduates have gone on to become an elementary school math specialist, an actuary at Metlife, a senior financial analyst, an accountant and a speech language pathologist.

Notable mathematicians

Many mathematics majors have become renowned mathematicians, including Ruth Charney, professor of mathematics at Brandeis; Ralph Cohen, professor of mathematics at Stanford University; János Kollár, professor of mathematics at Princeton University; and Chuu-Lian Terng, chaired professor of mathematics at the University of California at Irvine.

“Pure mathematics is, in its way, the poetry of logical ideas.”

Albert Einstein



Photo by Ken Schles

Office of Communications ©2011
Brandeis University A168