

Mathematical Sciences, PhD

Specialization(s): College Teaching; Interdisciplinary Studies; Pure and Applied Mathematics; Statistics

Department: [Mathematics and Statistics Department](#)

College: [College of Science](#)

Overview

About This Degree

Students earning a PhD in mathematical sciences can choose to study in several different areas. The department's excellent ratio of graduate students to faculty permits close personal guidance for each student. Students are able to tailor their programs of study to match their interests in specific areas of mathematics and statistics as well as interdisciplinary research.

Career Options

Students who receive the PhD in any of the available specializations are qualified to become tenured faculty at universities and colleges. They can also work in governmental and industrial research centers.

The college teaching specialization specifically prepares students to teach undergraduate mathematics in colleges and universities.

What it takes

Admissions Requirements

Students may enter the PhD program directly from a bachelor's degree. While applicants are not required to have undergraduate degrees in mathematics or statistics, they must have strong backgrounds in these areas. The graduate committee will evaluate each transcript to determine if the applicant's undergraduate work in mathematics and statistics is sufficient.

Application Requirements:

- Complete the [online application](#)
- Pay the \$55 application fee
- Score at or above the 40th percentile on the GRE (score of 700 out of 800 on the quantitative section)
- Have a 3.0 or higher GPA on your last 60 semester or 90 quarter credits
- Provide transcripts of all college/university credits
- Provide three contacts for letters of recommendation

International students have [additional admissions requirements](#).

Admissions Deadlines

The department has the following application deadline:

- Fall semester – February 1

Financial Assistance

A majority of students receive major financial assistance with their studies via [teaching or research assistantships](#). All students that meet the qualifications may receive [tuition awards](#) and subsidized [health insurance](#) as well.

A variety of additional funding opportunities are available, including [fellowships](#), [scholarships](#), and [travel support](#).

Program Requirements

[Click here](#) to see course requirements for the **Doctor of Philosophy**.

Doctoral comprehensive examinations in the Department of Mathematics and Statistics are set by a student's supervisory committee and are intended to test the student's depth of knowledge in areas related to their research specialization and career goals. The exams themselves may be comprised of individual exams set and graded by subsets of the supervisory committee, a single exam written and graded by the committee, oral examinations by the committee or a subset, or mixtures of these as the committee sees fit. Comprehensive exams must be taken in or before the third year of matriculation in the doctoral program.

Contact

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Get Involved

Professional Organizations, Honor Societies, and Clubs

American Mathematical Society: AMS is the largest organization of research mathematicians. The society's programs and services for its members and the global mathematical community include professional programs, publications, meetings and conferences, support for young scholars programs, tools for researchers and authors, and a public awareness office that provides resources to members, students, teachers, the media, and the general public.

American Statistical Association: ASA is the largest organization of mathematicians in industry and academe. The ASA supports excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, accreditation, and advocacy. Its members serve in industry, government, and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.

Biometric Society: ENAR and WNAR (the eastern and western North American regions) is an association of statisticians working on problems in statistics with biological, agricultural, and medical applications. The society's goal is to advance biological and life science through the development of quantitative theories and the application, development, and dissemination of effective mathematical and statistical techniques.

Institute of Mathematical Statistics: IMS is an organization mainly for research statisticians working in academe. The IMS is an international professional and scholarly society devoted to the development, dissemination, and application of statistics and probability. The institute currently has about 4,500 members in all parts of the world.

Interface Foundation: This is a society working on problems at the interface between statistics and computing sciences. Its members are computational scientists, statisticians, mathematicians, and individuals from related discipline areas interested in the interface between computing science and statistics. Interests include topics such as computational statistics, statistical software, exploratory data analysis, data mining, pattern recognition, scientific visualization, and related fields.

Mathematical Association of America: MAA is the largest professional society that focuses on mathematics accessible at the undergraduate level. Its members include university, college, and high school teachers; graduate

and undergraduate students; pure and applied mathematicians; computer scientists; statisticians; and many others in academia, government, business, and industry. MAA is focused on teaching particularly at the high school and college levels.

Society for Industrial and Applied Mathematics: SIAM is the largest organization of applied and computational mathematicians working in industry, academe, and government. SIAM fosters the development of applied mathematical and computational methodologies needed in these various application areas. Through publications, research, and community, the mission of SIAM is to build cooperation between mathematics and the worlds of science and technology.

Journal Club: The purpose of the Journal Club is to introduce participants to mathematics and statistics education research by providing an opportunity to read, present, and discuss noteworthy papers in the field. The primary intended audiences are graduate students and faculty members interested in starting research on education topics, and needing familiarity with the education literature.