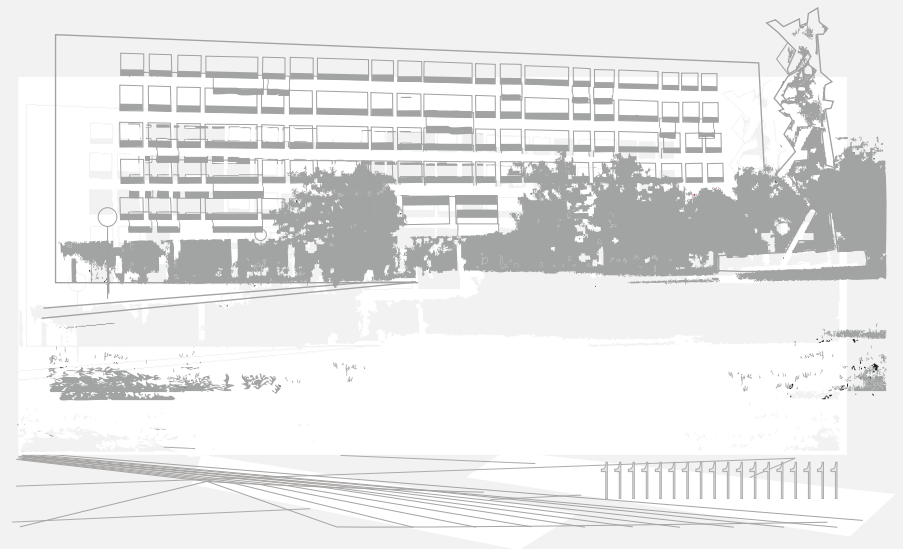


UNIVERSITY of HOUSTON

DEPARTMENT OF MATHEMATICS



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Introduction

Mathematics is the science of rigor, dealing with the application of analytical arguments to problems in many areas of science and engineering.

The department of mathematics offers several graduate degrees – Ph.D., Master of Science, Master of Science in Applied Mathematics, Master of Arts. The department also anticipates that a new program of Master in Statistics will be launched in the Fall 2017 or Spring 2018.

Our graduate students are employed in both academia and industry. The most noticeable positions include tenure-track positions in the University of Notre-Dame and George Mason University, industrial employment in Microsoft, Exxon-Mobil, CGG Veritas, USAA, research scientist positions in Los Alamos and Sandia DOE labs.

Research employment includes postdoctoral positions in Worcester Polytechnic Institute, IBM Research Center, Mathematical Biosciences Institute (Ohio), University of Wurzburg, Michigan State University, Pacific Northwest National Laboratory, University of Missouri, Airforce Institute of Technology.

Research

The Department of Mathematics, at the University of Houston, consists of approximately 50 nationally and internationally recognized faculty members actively conducting research in many areas of pure and applied mathematics. In particular, the major research areas currently represented in the department include:

- Numerical Analysis and Scientific Computing
- Dynamical Systems
- Partial Differential Equations
- Stochastic Processes and Financial Mathematics
- Operator Algebras
- Applied Analysis including Frames, Wavelets, Compressed Sensing, and Image Analysis
- Complex Geometry and Complex Analysis
- Mathematical Biology

Recently introduced research disciplines include:

- Data Analytics
- Machine Learning
- Quantum Information Theory
- High-Performance Computing

Program & Degrees



photo/University of Houston

Doctor of Philosophy in Mathematics (Ph.D)

The Ph.D. program is open to students who wish to pursue a career in academic research or teaching, as well as in industry. This program emphasizes research in pure and applied mathematics. Therefore, students with a strong background in mathematics with a major in quantitative fields such as pure and applied mathematics, economics, engineering, physics are encouraged to apply. The programs aim to prepare students for positions in academia and industry which require a deep knowledge of advanced mathematical concepts. Students completing this program must demonstrate research competence by successfully defending a dissertation in one of the research areas represented in the department.

<http://www.uh.edu/nsm/math/graduate/PhD-outline/>

Program & Degrees

photo/University of Houston

**Master of Science in
Mathematics (M.S.)**

The Master of Science in Mathematics program provides a rigorous training in the area of mathematics. This program emphasizes a curriculum in pure mathematics which is geared towards developing analytical mathematical skills. Students entering this program are expected to be familiar with mathematical proofs at the undergraduate level. This program prepares students for further academic career, as well as teaching in a higher education institution.

<http://www.uh.edu/nsm/math/graduate/ms-outline/>

Program & Degrees

photo/University of Houston

**Master of Science in
Applied Mathematics (M.S.)**

The intent of this program is to provide students with training in mathematics appropriate for many professional positions in industry. In particular, this program is aimed at developing practical computational and analytical mathematical skills required to tackle realistic problems. Students entering this program are required to have some background in applied mathematics equivalent to at least a minor in mathematics. Several professional certificate programs are offered under this program for students who want to specialize in a particular area of interest.

<http://www.uh.edu/nsm/math/graduate/ms-applied-outline/>

Program & Degrees

photo/University of Houston

Master of Arts in Mathematics (M.A.)

The primary purpose of the M.A. program is to prepare students to teach mathematics at the secondary school and junior/community college levels. In the M.A. program, all courses are offered online and students do not need to come to our campus.

There is a regular schedule of online classes each semester, including the summer sessions. As a result, there is little difficulty in combining a full-time teaching position with the program's course work.

<http://www.uh.edu/nsm/math/graduate/ma-outline/>

Program & Degrees

photo/University of Houston

Master of Science in Statistics & Data Science (M.S.)

Aims of the program:

- Build a solid foundation in applied statistics, and provide rigorous principles to guide statistical inference.
- Learn fundamental skills, key software and tools for machine learning and big data analytics.
- Gain hands-on experience in solving real world problems through summer internship to analyze real world data sets in industrial, commercial and biomedical environments

Fall Application Deadlines:

May 1st (Non-resident) and June 1st (Resident)

<http://www.uh.edu/nsm/math/graduate/datascience>

Program & Degrees

photo/University of Houston

Concentration for M.S. in Applied Mathematics

Students take specialized courses to receive specialized training in one of these areas.

The **Financial Mathematics Graduate Certificate** provides the academic training for students who want to pursue a career in the financial industry.

The **Computational Mathematics Graduate Certificate** is particularly suitable for students who wish to pursue an industrial career in scientific computing.

In addition, students might undergo a specialized training by enrolling into a Master's Tutorial (6 credit hours) in one of the popular research areas, such as Machine Learning, Applied Probability/Financial Mathematics, or Compressed Sensing.

<http://www.uh.edu/nsm/math/graduate/ms-applied-outline/>

Program & Degrees

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Advising & Deadlines

Contact Information:

Dr. Ilya Timofeyev, Graduate Director: ilya@math.uh.edu

Neha Valji, Academic Advisor II: neha@math.uh.edu

Lisa Vaughn, Program Manager for Statistics & Data Science, M.S.
lisa@math.uh.edu

Application Deadlines:

(Ph.D. with departmental TA support):

April 1 (Fall), March 15 (Spring - early), October 1 (Spring - late)

(M.S. & Applied Mathematics):

May 1 (Fall - Non-resident), June 1 (Fall - Resident)

October 15 (Spring - Non-resident), November 1 (Spring - Resident)

(M.A - US Applicants only):

June 1 (Fall), November 1 (Spring- Early), May 1 (Summer)

(Statistics & Data Science, MS. - Fall only):

May 1 (Non-resident), June 1 (Resident)

Additional deadlines: <http://www.uh.edu/nsm/math/graduate/admissions/>