# Department of Mathematics & Statistics Faculty

- Dr. Edward Allen: Algebraic Combinatorics
- Dr. Justin Allman: Algebraic Topology and Geometry
- Dr. Kenneth Berenhaut: Applied Probability
- Dr. Abbey Bourdon: Arithmetic Geometry
- Dr. Lucy D'Agostino McGowan: Causal inference
- Dr. Nicole Dalzell: Statistics Education
- Dr. Rob Erhardt: Environmental Statistics
- Dr. Jennifer Erway: Numerical Optimization
- Dr. Ciaran Evans: Changepoint Detection
- Dr. Claudia Falcon: Applied Mathematics
- Dr. John Gemmer: Applied Mathematics
- Dr. Staci Hepler: Bayesian Modeling
- Dr. John Holmes: The Analysis of PDEs
- Dr. Hugh Howards: Topology and Geometry
- Dr. Emily Huang: Digital Phenotyping
- Dr. Sneha Jadhav: Functional Data Analysis
- Dr. Miaohua Jiang: Dynamical Systems and Smooth-Ergodic Theory
- Dr. Ellen Kirkman: Noncommutative Algebra
- Dr. Leandro Lichtenfelz: Differential Geometry
- Dr. Sarah Mason: Algebraic Combinatorics
- Dr. Frank Moore: Commutative Algebra
- Dr. Jason Parsley: Differential Geometry
- Dr. Sarah Raynor: Partial Differential Equations
- Dr. Stephen Robinson: Partial Differential Equations
- Dr. Jeremy Rouse: Number Theory
- Dr. Lynne Yengulalp: Topology and Set Theory



GRADUATE SCHOOL of ARTS & SCIENCES

### Application Forms and Graduate Bulletin may be found here:

graduate.wfu.edu

For Fall Admission:

Applications are due January 15

#### For more program information, contact:

Mathematics Graduate Program Director Department of Mathematics & Statistics Wake Forest University P. O. Box 7388 Winston-Salem, NC 27109

Phone: 336-758-5300 Fax: 336-758-7190 Email: rouseja@wfu.edu

#### Department website: http://college.wfu.edu/math/







#### **Department of Mathematics & Statistics**





## WAKE FOREST Department of Mathematics & Statistics



#### **Overview**

The Department of Mathematics and Statistics offers the degree of Master of Science. The degree requirements are flexible and permit both thesis and non-thesis programs of study, with a focus on either mathematics (pure or applied) or on statistics.

The program is designed to accommodate students seeking either a terminal degree or preparation for Ph.D. work at another institution. The program fosters personal interactions with faculty and other students which leads to significant mathematical growth. It provides a supportive and stimulating environment appropriate for students seeking to enrich their understanding of mathematics and statistics before making a career choice or choosing a Ph.D. program.

Faculty research interests include algebra, topology, number theory, combinatorics, differential equations, analysis, medical and biological applications, and scientific computing; statistical climatology, environmental and ecological statistics, Bayesian modeling and computing, stochastic processes and network analysis, applications of statistics to social sciences and biology.

#### **Course Offerings**

The course offerings of our program are varied. Every year we offer graduate courses in algebra, analysis, statistics, and topology, as well as a number of other advanced courses, including those in applied mathematics, number theory, discrete mathematics, computational mathematics and geometry. A complete two-year schedule is on our website.

#### Academic Environment

There is a great deal of personal interaction between the faculty and students. The faculty of the department have diverse interests and are willing to share them with students.

The department sponsors chapters the Association for Women in Mathematics as well as the mathematical honor society Pi Mu Epsilon. The department sponsors many activities including colloquia, intramural sports teams and picnics.

Numerous computing facilities are available to graduate students including access to a department server and the University's High Performance Computing Cluster.

The University's library subscribes to a variety of journals and has an extensive collection of back holdings. The library also has a good monograph collection. Interlibrary loan is available.

#### **Degree Requirements**

Students typically devote two years to completing a master's degree in our department and most students gain from investing two full years. However, occasionally, a student will finish in three semesters or even in one year and a summer.

The master of science degree can be obtained in four distinct ways. Students may choose to do the mathematics or the statistics track; students may also choose a thesis or nonthesis track. The non-thesis track requires more coursework while the thesis track requires oral and written demonstration of an extended mathematical or statistical investigation under the guidance of a faculty advisor. As students typically take three courses per semester, only the thesis option allows the possibility of finishing in an academic year plus a summer.

The degree requirements for each track are summarized in the table below:

Degree Requirements	Math Thesis Track	Math Non- Thesis Track	Statistics Thesis Track	Statistics Non- Thesis Track
Core Courses	3	3	4	4
Electives	5	9	4	8
Additional Requirements	Thesis (counts for 2 courses)	None	Thesis (counts for 2 courses)	None
<b>Total Hours</b>	30	36	30	36

#### **Financial Aid**

Almost all of the participants in our program receive substantial aid: a teaching assistantship, or a full or partial scholarship. Students who receive assistantships receive a full scholarship plus a living allowance (\$15780 for the 2021-2022 academic year). Students who receive a partial scholarship are responsible for the balance of their tuition, which is \$9276 for academic year 2021-2022. Students who do not have an assistantship are eligible to work in the Math Center on an hourly basis.

#### Admission Requirements/Prerequisites

Candidates for admissions to the Master of Science Program in the Department of Mathematics and Statistics should have completed at least thirty three semester hours of mathematics and statistics at an accredited college or university. At least fifteen of these hours should require, as a prerequisite, two semesters of calculus or a semester of linear algebra. Most successful applicants have taken three semesters of calculus (through multi variable calculus), linear algebra, abstract algebra (or modern algebra) and advanced calculus (or other advanced courses in analysis). Prior experience with computing is helpful but not required, particularly for the statistics track. Applicants who do not have this preparation may be required to take additional preparatory courses.



#### Where Do Graduates Go After Wake Forest?

Graduates from our undergraduate and graduate programs in mathematics and statistics have been very successful. Graduates of our Masters program have gone on to Ph.D. programs in Mathematics, Statistics, Biostatistics, Education, Operations Research, and Computer Science at a large variety of institutions. A list of schools to which our graduates have gone is available on our website.

Graduate students have also taken jobs in actuarial science, statistics, biostatistics, analytics, computing, government security, government contracting, and teaching at the college and high school level.