

# Mathematics and Statistics

The Department of Mathematics and Statistics offers two master's degrees (one in mathematics and one in statistics) and two doctoral degrees (one in mathematics and one in statistics). The areas of study for mathematics include algebra, algebraic geometry, real and complex analysis, differential geometry, and topology. The areas of study for statistics are mathematical statistics, survival analysis, modeling, statistical computing for massive data, Bayesian regulation, bioinformatics, longitudinal and functional data analysis, statistical computation, asymptotic theory, objective Bayes, bootstrap, post-selection inference, and the application of statistics to medicine. Because it is difficult to make up coherent programs for students entering in the middle of the year, students are ordinarily admitted only in the fall.

When they first arrive, graduate students have the opportunity to share common concerns and to become acquainted. One of the most attractive features of our program is the friendly and supportive atmosphere that develops among our graduate students. Advanced courses in the Washington University mathematics and statistics department can build on the common background shared by all students. As a result, these courses are richer and nearer to the level of PhD work than typical advanced courses.

Students typically complete the PhD program in five years, and those students may expect up to five years of support. Continuation of support each year is dependent upon normal progress toward the degree and the satisfactory performance of duties. A student who comes to Washington University with advanced preparation may finish in less time. On the other hand, some students find that it is advisable for them to take preparatory math courses before attempting the qualifying courses. In special cases, the time schedule may be lengthened accordingly. Each student should plan to develop a close relationship with their thesis advisor so that the advisor may have a realistic idea of the student's progress.

Graduate study in mathematics or statistics is not for everyone. Entering students usually find that the time and effort required to succeed goes well beyond anything they encountered as undergraduates. Success requires both ample mathematical ability and the determination to grapple with a subject for many days or weeks until the light of understanding shines through, and the experience can be daunting. Those who continue in their studies are largely those for whom the pleasure of attaining that understanding more than compensates for the required effort. For such persons, the life of a mathematician can be richly rewarding.

**Email:** Gregory Knese, Director of Graduate Studies  
([geknese@wustl.edu](mailto:geknese@wustl.edu)), or Mary Ann Stenner ([stenner@wustl.edu](mailto:stenner@wustl.edu))

Phone: 314-935-6760

Website: <http://wumath.wustl.edu/graduate>