DOCTORATE IN STATISTICS AND APPLIED PROBABILITY

UC **SANTA BARBARA**
Department of Statistics

ABOUT THE PROGRAM

The Statistics and Applied Probability Ph.D. program is a rigorous program seeking balance between theory and applications. We welcome students with interdisciplinary interests and different levels of preparation. Our students come from various disciplines, including mathematics, statistics, engineering, the sciences, and economics. Doctoral candidates conduct research in Statistics and Applied Probability, constructing and implementing advanced methods of data analysis to address crucial cross-disciplinary questions, along with developing the fundamental theory that supports these methods. They have the option to work with faculty of the Center for Financial and Actuarial Research, Bioengineering, Qualitative Methods in Social Sciences, and Data Science Initiative.

Optional Emphases

The department offers optional emphases for Ph.D. students in the following distinct interdisciplinary areas:

- Financial Mathematics and Statistics (FMS)
- Bioengineering
- Qualitative Methods in the Social Sciences (QMSS)

Each emphasis connects students to thriving groups of researchers taking cross-disciplinary approaches and provides a supportive community for exchange of ideas.

Fellowship Opportunities

Doctoral students are supported through campus-wide fellowships, and teaching and research assistantships. Merit-based awards of block grant funds help to offset non-resident tuition costs.

Additional Program Details

The online application for the upcoming academic year is available in early September. PhD applications are accepted for the Fall quarter only.

www.pstat.ucsb.edu

REQUIREMENTS

Application procedures are available at https://www.pstat.ucsb.edu/graduate/perspective/apply.

All applicants must hold a bachelor's degree in Statistics, Mathematics, or other strong quantitative fields. The department is expecting that quantitative courses, particularly those in probability and statistical theory, be passed with distinction. Applicants must have completed coursework in the following areas:

- Calculus-based Probability, law of large numbers and central limit theorems.

- Theory of statistical inference, hypothesis tests and regressions.

- Linear algebra including vector spaces, bases in vector spaces, eigenvalues, and eigenvectors.

A statement of Purpose, Personal Achievements/Contributions statement, Resume, transcripts, three reference letters, and general GRE scores are required. Applicants from non-English speaking countries must submit TOEFL or IELTS scores.

DEADLINES

Fall only – December 15 to be considered for campus-wide fellowships;
February 15, final deadline.

CONTACT US

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ADDITIONAL INFORMATION

- The *Center for Financial Mathematics and Actuarial Research* (CFMAR) provides national and international leadership in actuarial science and quantitative finance from different perspectives. Research activities are directed toward study of financial markets, insurance and risk management, including Systemic Risk, Portfolio Optimization, Monte Carlo Simulation, Longevity Risk, and Predictive Modeling of Healthcare Insurance. The Center provides a forum for the scholarly exchange of ideas across the disciplines of economics, statistics, mathematics, actuarial science and scientific computation through distinguished lectures, seminars, conferences, and publications.

- The *Quantitative Methods in the Social Sciences* interdisciplinary PhD emphasis offers students an opportunity to apply cutting-edge statistical techniques to research in social sciences. The curriculum is designed to provide students with a broad interdisciplinary perspective on the use of quantitative methods in the social sciences.

- The *Bioengineering Ph.D.* emphasis is designed to prepare doctoral students to undertake research at the interfaces of engineering, physical sciences, biology, and medicine.