

DOCTOR OF PHILOSOPHY IN THE FIELD OF STATISTICS (STEM)

OVERVIEW

Statistics plays an important role throughout society, providing methodologies for advances in medicine, genetics, and other research arenas, and for making decisions in business and public policy. GW's PhD in statistics program provides advanced training in topics including probability, linear models, time series analysis, Bayesian statistics, inference, reliability, statistics in law and regulatory policy, and more. The degree provides training in theory and applications and is suitable for both full- and part-time students. Most graduate courses are offered in the early evening to accommodate student schedules.

Nearly all GW statistics PhD graduates have secured positions in the statistics or data science industry, with employers including Amazon, Facebook, and Capital One. During the program, students work closely with faculty (<https://statistics.columbian.gwu.edu/people/>) on original research in their area of interest.

To be admitted, applicants typically have a master's degree in statistics or a related discipline. Students need a strong background in mathematics, including courses in advanced calculus, linear algebra, and mathematical statistics.

This is a STEM designated program.

Visit the program website (<https://statistics.columbian.gwu.edu/graduate/phd-statistics/>) for additional information.

ADMISSIONS

Admission deadlines: Fall - January 15
Spring - October 1

Standardized test scores:

GRE general test recommended but not required (institutional code 5246).

The Test of English as a Foreign Language (TOEFL), the academic International English Language Testing System (IELTS), or the PTE Academic is required of all applicants except those who hold a bachelor's, master's, or doctoral degree from a college or university in the United States or from an institution located in a country in which English is *the* official language, provided English was the language of instruction.

Minimum scores for the program are:

- Academic IELTS: an overall band score of 6.0 with no individual score below 5.0; or
- TOEFL: 550 on paper-based or 80 on Internet-based; or
- PTE Academic: 53

Recommendations required: Two (2) recommendations

Prerequisite requirements:

A bachelor's degree or master's degree in mathematics, statistics, or related discipline. The main requirement is strong background in mathematics including courses in advanced calculus, linear algebra, and mathematical statistics. Some deficiencies may be made up concurrently in the first year of the program.

Prior academic records:

Transcripts are required from all colleges and universities attended, whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Unofficial transcripts from all colleges and universities attended must be uploaded to your online application. Official transcripts are required only of applicants who are offered admission.

If transcripts are in a language other than English, English language translations must be provided. The English translation alone should be uploaded into your application.

Statement of purpose:

In an essay of 250 – 500 words, state your purpose in undertaking graduate study in your chosen field. Include your academic objectives, research interests, and career plans. Also discuss your related qualifications, including collegiate, professional, and community activities, and any other substantial accomplishments not already mentioned on the application. If you are applying for an assistantship or fellowship, you should also describe any teaching experience you have had.

International applicants only:

Please review International Applicant Information (<https://columbian.gwu.edu/international-graduate-applicants/>) carefully for details on required documents, earlier deadlines for applicants requiring an I-20 or DS-2019 from GW, and English language requirements.

Supporting documents not submitted online should be mailed to:

Columbian College of Arts and Sciences, Office of Graduate Studies
The George Washington University
801 22nd Street NW, Phillips Hall 107
Washington DC 20052

For additional information about the admissions process visit the Columbian College of Arts and Sciences Frequently Asked Questions (<https://columbian.gwu.edu/graduate-admissions-faq/>) page.

Contact:

askccas@gwu.edu
202-994-6210 (phone)

Hours: 9:00 am to 5:00 pm, Monday through Friday

REQUIREMENTS

Prerequisite: a master’s degree in statistics or a related discipline. The main requirement is a strong background in mathematics, including courses in advanced calculus, linear algebra, probability and mathematical statistics. Some deficiencies may be made up concurrently during the student’s first year. In some instances, a student may enter the PhD program with a bachelor’s degree.

The following requirements must be fulfilled:

The general requirements stated under Columbian College of Arts and Sciences, Graduate Programs (<https://bulletin.gwu.edu/arts-sciences/#degreeregulationstext>).

The requirements for the Doctor of Philosophy Program (<https://bulletin.gwu.edu/arts-sciences/#doctoralstext>)

Code	Title	Credits
Required		
STAT 6201	Mathematical Statistics I	
STAT 6202	Mathematical Statistics II	
STAT 6223	Bayesian Statistics: Theory and Applications	
STAT 8257	Probability	
STAT 8258	Distribution Theory	
STAT 8263	Advanced Statistical Theory I	
STAT 8264	Advanced Statistical Theory II	
At least two of the following:		
STAT 6218	Linear Models	
STAT 8226	Advanced Biostatistical Methods	
STAT 8259	Advanced Probability	
STAT 8262	Nonparametric Inference	
STAT 8265	Multivariate Analysis	
STAT 8273	Stochastic Processes I	

STAT 8274 Stochastic Processes II

STAT 8281 Advanced Time Series Analysis

A minimum of 21 additional credits as determined by consultation with the departmental doctoral committee

The General Examination, consisting of two parts:

A. A written qualifying examination that must be taken within 24 months from the date of enrollment in the program and is based on:

STAT 6201 Mathematical Statistics I

STAT 6202 Mathematical Statistics II

STAT 8257 Probability

STAT 8263 Advanced Statistical Theory I

B. An examination to determine the student's readiness to carry out the proposed dissertation research

A dissertation demonstrating the candidate's ability to do original research in one area of probability or statistics.