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An MS degree in Statistics from George Washington University will empower you with the tools needed to succeed as a statistician in today's data driven world. Steeped in rigorous scholarship and practical application, the MS in Statistics offers training in modern data analytical skills that prepare you for professional careers in business, industry and government. The master's degree also serves as a springboard for entering doctoral programs in statistics and related fields.

## About Us

Founded in 1935, GW's Department of Statistics was the first department of its kind in the United States to be housed in a college of arts and sciences. Since then, GW Statistics – a STEM-designated discipline – has established itself as a global leader in statistical education and research. Set in the heart of the nation's capital, students benefit from our location through a variety of enriched academic, professional, and social experiences. We are proud to be home to a welcoming community of diverse students from all over the world. Our faculty include Guggenheim Foundation Fellows and Ford Foundation Fellows, as well as leaders in the Institute of Mathematical Statistics (IMS) and the American Statistical Association (ASA). Our scholars receive prestigious research

grants from the National Science Foundation, the National Institute of Health, the Department of Defense and more. Connected by a shared GW experience, our distinguished alumni network spread over all fifty states and over 120 countries.

## Program Highlights

- Full or part-time study
- Evening courses for working professionals
- Certificate in Data Science applications and computation
- Internship and networking opportunities
- GW student chapter of ASA
- Connections to statisticians at top federal agencies
- Hands on experience in data analytic tools
- Individualized programs, with a thesis option
- Access to seminars, workshops and cutting-edge courses
- Option to take elective courses within other departments

## Scholarships

The following scholarships are offered to eligible students:

- [Global Leaders Fellowships](#) are available to qualified students from select countries. Students

receive an application fee waiver and are eligible to receive a tuition award of up to \$8,000 for the first year, which is renewable for a 2nd year.

- **Dean's Award:** Qualified students are eligible to receive \$12,500 (non-renewable) in tuition awards.

## Curriculum

The MS program offers a combination of theoretical, applied and computational statistics courses tailored for each student. The MS program requires 30 credits with no qualifying exam, and students can select from the following tracks or courses based on their interests in consultation with faculty advisors.

- **Biostatistics Track:** Data Analysis, Applied Linear Models, Longitudinal Data Analysis, Survival Analysis, Categorical Data Analysis, Statistical Methods in Bioinformatics and Computational Biology, Clinical Trials, Causal Inference, Network Analysis
- **Computational Track:** Fundamentals of SAS Programming for Data Management, Methods of Statistical Computing, Statistical Data Mining, Modern Regression Analysis, Statistical Methods in Bioinformatics and Computational Biology, Statistical Machine Learning, Statistical Deep Learning, Natural Language Processing



## Full-Time Faculty

**Our faculty include IMS and ASA Fellows, and International Statistical Institute (ISI) Elected Members.**

### Tatiana Apanasovich

Measurement error models, Spatial statistics, Positive definite kernels, Non/Semiparametric regression, Vector valued random fields

### Srinivasan Balaji

Diffusion processes, Markov chains, Stochastic differential equations and applications

### Sudip Bose

Bayesian statistics, Bayesian robustness, Pitman closeness

### Joseph L. Gastwirth

Statistics in law and public policy, Robust statistical methods, Grouped data

### Feifang Hu

A/B testing, Adaptive designs of clinical trials, Biostatistics, Bootstrap, Statistical methods for precision medicine

### Fang Rachel Jin

Deep learning, Natural language processing, Data mining, Machine learning, Social network analysis

### Subrata Kundu

Sequential analysis, Density estimation, Software reliability, Hypothesis testing, Nonparametric statistics

### Yinglei Lai

Bioinformatics, Computational biology, Statistical genetics

### Joshua Landon

Bayesian statistics, Stochastic processes, Markov chain, Monte Carlo methods, Decision analysis, Reliability

### Zhaohai Li

Genetic epidemiology, Statistical methods for meta-analysis, Empirical Bayes, Methods for clinical trials, Clinical biostatistics

### Hua Liang

Partially linear models, High-dimensional modeling, Model averaging and model selection, Mixed effect models, HIV/AIDS clinical trial and dynamic modeling

### Hosam M. Mahmoud

Probabilistic analysis of algorithms, Random discrete structures, Analytic probability

### Reza Modarres

Statistical computing, Multivariate analysis, Environmental statistics, Nonparametric statistics

### Tapan Nayak

Inference, Prediction, Software reliability, Randomized response design

### Qing Pan

Survival analysis, Recurrent event data, Observational studies, Costs analysis

### Huixia Judy Wang

Biostatistics, Extreme value theory and application, High-dimensional inference, Nonparametric and semiparametric regression, Quantile regression

### Xiaoke Zhang

Functional/longitudinal data analysis, Nonparametric regression/smoothing, Causal inference, Individualized treatment regimes, Health informatics

- **Applied Track:** Data Analysis, Applied Linear Models, Applied Multivariate Analysis, Design of Experiments, Bayesian Statistics, Longitudinal Data Analysis, Categorical Data Analysis, Modern Regression Analysis, Statistical Consulting, Legal Statistics, Sample Surveys, Causal Inference, SAS Programming for Data Management
- **Theoretical Track:** Mathematical Statistics, Linear Models, Bayesian Statistics, Probability, Distribution Theory, Advanced Probability, Nonparametric Inference, Advanced Statistical Theory, Multivariate Analysis, Stochastic Processes, Categorical Data Analysis

## Recent Placements

- **Academia:** Doctoral programs at George Washington University, Duke, Harvard, Johns Hopkins, Ohio State University, University of Georgia, UC Irvine, University of Bath (UK), SUNY (Buffalo), George Mason University, University of North Carolina (Chapel Hill), University of Connecticut.
- **Industry:** Facebook, Amazon, IMF, World Bank, Capital One, JPMorgan Chase & Co, Pfizer, Merck, Novartis, Gallup, Ernst & Young, Westat, Citibank, Microsoft, Didi (China), Alibaba (China)
- **Government and other organizations:** American Institutes for Research, US Census Bureau, Federal Reserve Board, FDA, EPA, NIH.

## Admission Requirements

- GRE is required. TOEFL, IELTS, or PTE required for international students.
- Undergraduate degree with coursework in multivariate calculus, matrix theory, and at least two undergraduate statistics courses.

## Application Process

**Website:** [columbian.gwu.edu/graduate-applicants](http://columbian.gwu.edu/graduate-applicants)

**Deadlines:** February 1 (Fall Scholarship); April 1 (Fall Admission); October 1 (Spring Admission & Scholarship)

**Contact:** Prof. Tapan Nayak (Director)

**Email:** [tapan@gwu.edu](mailto:tapan@gwu.edu)

## Learn More

**Website:** [GO.GWU.EDU/MSSTAT](http://GO.GWU.EDU/MSSTAT)

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