



EMORY

L A N E Y
GRADUATE
S C H O O L

Biostatistics



The Department of Biostatistics and Bioinformatics hosts the first Center for Biomedical Imaging Statistics in the nation and is at the leading edge of the rapidly emerging field of bioinformatics.

Public Health

Biostatistics

The Ph.D. program in Biostatistics prepares students for research careers by offering a blend of theoretical and methodological courses. Our teaching curriculum is based on the principle that almost every biostatistician will have to spend at least some of his/her time on statistical analysis of real-life data. Therefore, we prepare our students to be familiar with a variety of statistical methods and approaches by exposing them to real-life problems through consulting activities and internships.

Research and Collaboration

Emory's Biostatistics PhD program offers students an exciting range of challenging research projects, as well as possible career opportunities.

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Biostatistics faculty collaborate with researchers in a variety of disciplines, developing and applying statistical methodology in search of solutions to medical and public health problems. They have ties with many affiliates both within Emory and in the broader health research community. These affiliates include, the Emory School of Medicine, Grady Memorial Hospital, Wesley Woods Geriatric Hospital, the Atlanta Veteran's Administration Center, the American Cancer Society national headquarters, the U.S. Centers for Disease Control and Prevention (CDC), and various branches of the National Institutes of Health.

Specific research projects cover a broad range of issues and methodologies. Some samples include:

- The development of statistical methods to analyze large-scale genetic and neuroimaging data to further our understanding of complex disorders such as Alzheimer's disease and schizophrenia;
- Study of Pollutants and Health in Atlanta (SOPHIA);
- Public health surveillance of Buruli ulcer in Africa;
- Stenting vs. Aggressive Medical Management for Preventing Recurrent Stroke in Intracranial Stenosis (SAMMPRIS).

CREATE NEW KNOWLEDGE



For a full list of current and recent research projects, visit www.sph.emory.edu/bios/research.php.

Opportunities for Practical Training

Biostatistics graduate students often have opportunities for practical experience, through collaborative research with biostatistics faculty members or through summer internships with some of the many entities affiliated with the program. In the past, students have held internships at the CDC and at nationally prominent pharmaceutical and consulting firms. Teaching opportunities have also been available.

Computing

Faculty and students have access to a high-performance computing cluster in addition to a dedicated computer lab in the Department of Biostatistics and Bioinformatics.

Curriculum

The Ph.D. program in Biostatistics is designed for individuals with strong quantitative skills and background or interest in the biological, medical, or health sciences. To the extent possible, the curriculum of each student is tailored to his or her background and interests. Students can enter the Ph.D. program with a bachelor's or a master's degree.

The Ph.D. coursework can be completed in 2 – 3 years, depending on students' previous training. Our website has a list of required courses. Following the relevant coursework, students take a Ph.D. Methods Exam and a Ph.D. Theory Qualifying Exam.

The dissertation can be completed in two years.

In addition to the general Biostatistics curriculum, the program offers two specialized training programs.

THE BIOINFORMATICS, IMAGING, AND GENETICS (BIG) Concentration gives Ph.D. students in Biostatistics the opportunity to learn to develop statistical and computational innovations applied in one of these three areas. Students choose a focus area and work with related degree programs in the Graduate Division of Biological and Biomedical Sciences — Genetics and Molecular Biology, Immunology and Molecular Pathogenesis, Neurosciences, and Population Biology, Ecology, and Evolution (PBEE). Students participating in the BIG concentrations complete the core Biostatistics program, electives in biostatistics and in their area of scientific concentration, and participate in laboratory rotations to enhance their applied experiences. The concentration trains biostatisticians knowledgeable in their applied field of bioscience with the ability to further the science and insight with new statistical methods.

ENVIRONMENTAL BIOSTATISTICS TRAINING PROGRAM focuses on the interaction of two research themes:

- statistical methods for environmental policy, pertaining to setting and enforcing standards for priority pollutants, quantitative risk assessment, and assessments of environmental justice concerned with differential impacts of environmental exposures across sociodemographic groups); and
- statistical methods in quantitative disease ecology, e.g., quantifying environmental impacts on vector-borne diseases and zoonoses such as rabies and Lyme disease, including investigations of the phylogeography or spatial patterns of particular genetic strains of such diseases.

The training program integrates these two main areas through coursework and a “research rotation” for trainees. The program involves faculty from Biostatistics, Environmental and Occupational Health, Epidemiology, Biology, and Law.

Students

Students entering graduate programs in Biostatistics and Bioinformatics come from a variety of undergraduate fields. Many have undergraduate degrees in mathematics, applied mathematics or statistics. Others may have majored in the biological or social sciences. All students are expected to have a strong undergraduate background in mathematics or statistics and a strong desire to study the theory and application of statistical methods in the biological and health sciences.

Employment prospects for Ph.D. level biostatisticians have been excellent in recent years. Positions as faculty or researchers are commonly available in industry, academia and government agencies. The monthly news magazine of the American Statistical Association (ASA), *Amstat News*, contains nationwide listings of career opportunities for biostatisticians.

Recent graduates from our program have gone on to diverse positions:

- Tenure-track faculty positions at Harvard University, University of Minnesota, University of Pittsburgh, Amherst College and Ursinus College.
- Research Statistician, Google
- Mathematical Statistician, U.S. Centers for Disease Control and Prevention
- Senior Research Scientist, Eli Lilly Corporate Center

Faculty

The program has over 30 core and approximately 20 visiting or adjunct faculty members, many with joint appointments in other departments at Emory or with our affiliated organizations.

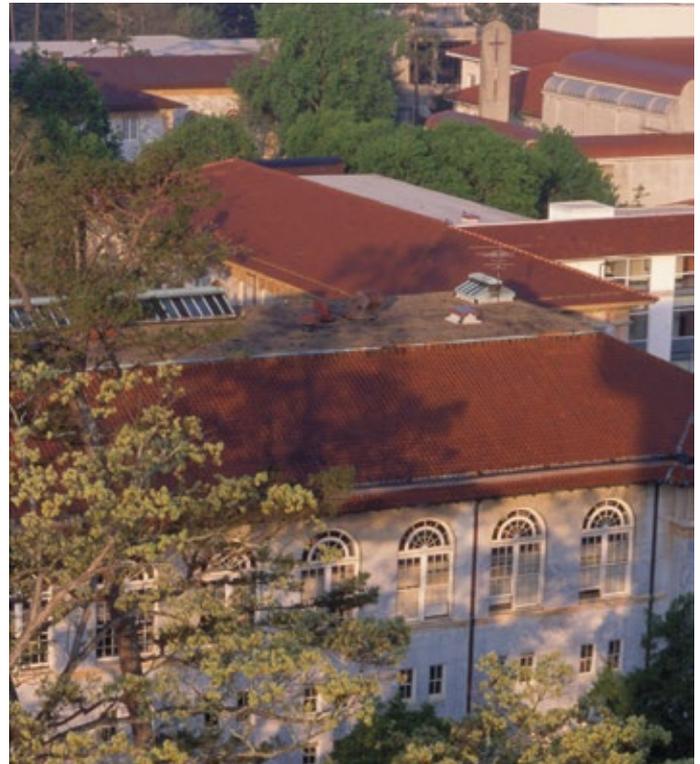
Our website has a complete list of faculty and their research interests: www.sph.emory.edu/bios/faculty.php.

Contact Information

For more information and application materials contact:

Department of Biostatistics and Bioinformatics
 Rollins School of Public Health
 Emory University
 1518 Clifton Rd., NE
 Atlanta, GA 30322

Fax: (404) 727-1370
 email: biosadmit@sph.emory.edu
 Web: www.sph.emory.edu/bios/index.php



About the Rollins School of Public Health

At Emory's Rollins School of Public Health, students learn to identify, analyze, and intervene in today's most pressing public health issues. The school is located in Atlanta, Georgia, often referred to as the "Public Health Capital of the World"—the city is also home to the U.S Centers for Disease Control and Prevention; CARE; the American Cancer Society; The Carter Center; the Arthritis Foundation; numerous state and regional health agencies; and health-related research programs of Emory University's Woodruff Health Sciences Center. This setting is ideal for hands-on research, collaborations with the world's leading public health agencies, and interdisciplinary work with national and international organizations.

The school comprises six academic departments: behavioral sciences and health education, biostatistics, environmental and occupational health, epidemiology, health policy and management, global health, and hosts over 20 interdisciplinary centers as well as a distance learning program.

In addition to four doctoral programs offered through the Emory Graduate School, the Rollins School of Public Health offers Master of Public Health, Master of Science in Public Health, Master of Science in Clinical Research (jointly with the Emory School of Medicine), and dual degree MPH programs with the schools of business, law, medicine, physician assistant, and nursing.

Visit www.sph.emory.edu.

Laney Graduate School Degree Programs

Anthropology
 Art History
 Behavioral Sciences and Health Education
 Bioethics
 Biological and Biomedical Sciences
 Biochemistry, Cell and Developmental Biology
 Cancer Biology
 Genetics and Molecular Biology
 Immunology and Molecular Pathogenesis
 Microbiology and Molecular Genetics
 Molecular and Systems Pharmacology
 Neuroscience
 Nutrition and Health Sciences
 Population Biology, Ecology, and Evolution
 Biomedical Engineering
 Biostatistics
 Business
 Chemistry
 Clinical Psychology
 Cognition and Development (Psychology)
 Comparative Literature
 Computer Science and Informatics
 Development Practice
 Economics
 Educational Studies
 English
 Environmental Health Sciences
 Environmental Sciences
 Epidemiology
 Film and Media Studies
 French
 History
 Graduate Institute of the Liberal Arts
 Health Services Research and Health Policy
 Islamic Civilizations Studies
 Mathematics
 MD/PhD
 Music
 Neuroscience and Animal Behavior (Psychology)
 Nursing
 Philosophy
 Physics
 Political Science
 Religion
 Sociology
 Spanish
 Women's, Gender, and Sexuality Studies



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Requests for Additional Information:

RECRUITMENT AND ADMISSIONS
 Ph.D. Program, Biostatistics
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 1518 Clifton Road
 Atlanta, GA 30322

(404) 727-6028
 (ask for Biostatistics and Bioinformatics)

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