GRADUATE DEGREE PROGRAMS

EPIDEMIOLOGY AND BIOSTATISTICS

Our department provides rigorous training in the fundamental sciences underlying public health practice. Our mission is to improve health and reduce health disparities in local communities, the state of Maryland, and the nation. Our epidemiology faculty have multi-faceted expertise in the epidemiology of infectious and chronic disease, with particular focus in the areas of HIV/sexually transmitted infections, cancer, health disparities, cardiovascular disease, obesity/physical activity and sexual and reproductive health. We also specialize in social and behavioral determinants of health, aging, cultural competency and community-based interventions. Our biostatistics faculty have research interests in biostatistics, epidemiology and bioinformatics. We apply statistical techniques to analyze and interpret public health data through survival and longitudinal analysis, computational statistics, statistical analysis of genomic and proteomic data, machine learning, neuroimaging statistics, network meta-analysis, missing data analysis and Bayesian hierarchical methods.

Current research projects include:

» Testing a randomized controlled trial intervention to improve quality of life among Korean American breast cancer survivors
» Using a social network approach to study risky behaviors for HIV/STIs
» Synthesizing multiple types of evidence using Bayesian hierarchical models
» Developing sample size and power calculations for genomic studies using next generation deep sequencing platforms
» Utilizing geotagged social media data (such as tweets) to construct national neighborhood indicators

Mary Jung
BS ’11, MPH ’13, PhD ’18
Oak Ridge Institute for Science and Education (ORISE) Fellow
U.S. Food and Drug Administration (FDA)

“I knew the UMD School of Public Health would equip me with the knowledge and tools to help me grow personally and professionally to become an epidemiologist. The SPH offers so many opportunities for collaboration across departments, as well as across schools and colleges at the university.”

ABOUT THE UNIVERSITY OF MARYLAND

RANKED
8
Best Value College
Kiplinger’s Personal Finance magazine

RANKED
15
Most Innovative School
U.S. News & World Report

RANKED
22
Public Research Institution
U.S. News & World Report
Graduate Degree Programs

Our department is committed to student success. Each master’s and PhD student is paired with an academic advisor who meets with the student regularly throughout the program in order to provide guidance on their program of study, research activities and career goals.

MASTER OF PUBLIC HEALTH, BIOSTATISTICS

Biostatistics is a science that addresses theory and techniques for describing, analyzing, and interpreting health data. The MPH in Biostatistics emphasizes the development of these skills to implement research studies of human health and disease; design data management systems; interpret quantitative data; and use statistical reasoning to address public health problems. Graduates of this 45-credit professional degree program are prepared to work in public health services as practitioners, researchers, administrators and consultants. Both full and part-time options available.

DOCTOR OF PHILOSOPHY, BIOSTATISTICS AND BIOINFORMATICS

Biostatistics and bioinformatics are important research fields in statistics with immensely broad applications in public health, medical and biological research. Bioinformatics is the science of developing and employing computational tools and techniques to analyze complex biological data, such as genome sequences, and has significant overlap with biostatistics. Students in our PhD program will be equipped with the knowledge and skills to take advantage of the increasing research opportunities in this rapidly developing field.

DOCTOR OF PHILOSOPHY, EPIDEMIOLOGY

Doctoral candidates in Epidemiology will develop research skills essential to scientific and professional practice in epidemiologic research. Students will gain core knowledge in the principles and methodology of epidemiological research and practice. Graduates will be prepared for a career in epidemiologic research in academia, government or the private sector.

Students may design their own research specialization or they may apply to one of our two specializations:
1) Social Epidemiology or
2) Environmental Epidemiology

For deadlines and application instructions, please visit sph.umd.edu/gradadmissions

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