

Master of Public Health

BIostatISTICS CONCENTRATION

2016–2017

The biostatistics (BSTP) concentration trains students to apply statistical principles and methods to problems in public health, medicine and biology. The program promotes analytic thinking and skills with an emphasis on applying research and evaluation to public health. Coursework in this concentration covers the span of biostatistics knowledge, including study design, data management, data analysis, interpretation, statistical reporting and the use of statistical software. Biostatistics concentration graduates are well prepared for employment in academia, government, nonprofits, non-governmental organizations and the private sector.

MPH CORE REQUIREMENTS (16 credit hours)		Credits
PH 7711	Epidemiologic Methods I	3
PH 7017	Fundamentals of Biostatistics I	4
PH 7140	Social & Behavioral Aspects of Public Health	3
PH 7150	Environmental Health	3
PH 7160	Introduction to the Health Care System	3
ADDITIONAL MPH REQUIRED COURSES (8 credit hours)		
PH 7019	Public Health Research Methods	3
PH 7960	Public Health Practicum	2
PH 7990 or 7991	Public Health Thesis or Capstone	3
Area Total:		24
CONCENTRATION (18 credit hours)		
Required BSTP Concentration Courses (12 credit hours)		
PH 7027	Fundamentals of Biostatistics II	3
PH 7525	Statistical Computing	3
PH 8820	Generalized Linear Models	3
PH 8830	Advanced Statistical Topics	3
Concentration Elective Courses (6 credit hours)*		
<i>Select at least two courses.</i>		
PH 7028	Introduction to Probability Theory & Statistical Inference	3
PH 8721	Epidemiologic Methods II	3
PH 8885	Fundamentals of Clinical Trials	3
PH 8890	Special Topics in Biostatistics (<i>may be repeated</i>)	3
Area Total:		18
Degree Total		42

***Elective Concentration Course.** These pre-approved BSTP elective courses do not need further approval to satisfy the BSTP elective requirement. However, there are other programs at the university that may offer satisfying courses, including but not limited to the following: Mathematics & Statistics, Decision Sciences, Marketing, Sociology, Public Management & Policy, Psychology and Educational Policy Studies. Other courses that may be approved to satisfy this elective requirement generally have course titles such as Structural Equation Modeling, Finite Mixture Modeling, Hierarchical Linear Modeling, Longitudinal Modeling, Survival Analysis, Bayesian Inference, Survey Sampling, Causal Inference, Missing Data or Nonparametric Statistics. Students should seek written pre-approval of any course not listed in the pre-approved BSTP elective courses above to count toward the BSTP elective requirement. Approval must come from both the division director and the Office of Academic Assistance.

BIOSTATISTICS CONCENTRATION EMPLOYMENT INFORMATION

2016–2017

Biostatistics involves the development and application of statistical techniques to scientific research in health-related fields, including medicine, epidemiology and public health, and includes statistical work in areas of environmental study, agricultural research and biology. Since the beginning of this century, biostatistics has become an indispensable tool in improving health and reducing illness.

Biostatisticians play essential roles in designing studies and analyzing data from research problems. They help formulate the scientific questions to be answered, determine the appropriate sampling techniques, coordinate data collection procedures and carry out statistical analyses to answer those scientific questions.

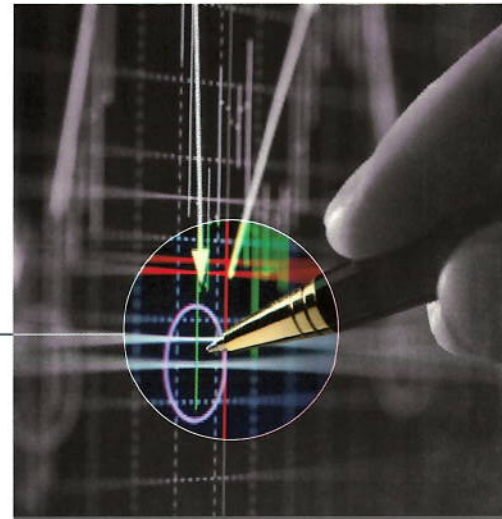
Biostatisticians with advanced degrees can look forward to excellent career opportunities in government, industry and academia. The shortage of biostatisticians is noted in "Objectives for the Nation" and the "Seventh Report to the President and Congress on the Status of Health Personnel in the United States."

Common Job Titles: Public health professional with biostatistical expertise, Biostatistician, Statistician, Data Analyst, Health Statistician, Public Health Analyst and more.

Potential Salary Range: \$53,947 – \$91,391

Useful Links for Public Health Career and Internship Information

American Society for Quality – Statistics Division: asq.org/statistics
 American Statistical Association: amstat.org
 Association of Schools & Programs of Public Health: aspph.org
 Centers for Disease Control & Prevention: jobs.cdc.gov
 Eastern North American Region International Biometric Society: enar.org
 Georgia Center for Nonprofits: gcn.org
 Georgia Governor's Intern Program: gov.georgia.gov/intern-program
 Idealist: idealist.org
 International Society for Clinical Biostatistics: iscb.info
 Public Service Careers: publicservicecareers.org
 This is Public Health: thisispublichealth.org
 This is Statistics: thisisstatistics.org
 University Career Services: career.gsu.edu
 World of Statistics: worldofstatistics.org



POTENTIAL EMPLOYERS

- Government:**
- Centers for Disease Control & Prevention
 - Department of Agriculture
 - Department of Veterans Affairs
 - Environmental Protection Agency
 - Food & drug Administration
 - National Institutes of Health
 - State departments of public health

- Academia:**
- Emory University
 - Georgia State University
 - Morehouse School of Medicine
 - University of Georgia

- Industry:**
- American Cancer Society
 - Children's Healthcare of Atlanta
 - Emory Healthcare
 - Merck and Abbott laboratories
 - RAND Corporation
 - RTI International

PROFESSIONAL DEVELOPMENT

- American Public Health Association
- American Statistical Association
- International Biometric Society
- International Society for Clinical Biostatistics
- International Statistical Institute
- Society for Prevention Research