

MASTER OF SCIENCE IN THE FIELD OF BIOSTATISTICS

Program Director and Academic Advisor A. F. Elmi

The master of science (MS) degree program in biostatistics is jointly administered by the Department of Statistics in the Columbian College of Arts and Sciences (CCAS) and the Department of Epidemiology and Biostatistics in the Milken Institute School of Public Health (SPH) and its associated research facility, The Biostatistics Center. This degree program is accredited by the Middle States Commission on Higher Education through the CCAS and by the Council on Education for Public Health through the SPH Regulations, and requirements for this graduate degree have been designed to be compatible with policies and scholarship requirements of both CCAS and SPH. The degree is conferred by Columbian College.

Visit the program website (<http://publichealth.gwu.edu/programs/biostatistics-ms>) for additional information.

REQUIREMENTS

The following requirements must be fulfilled: 33 credits, including 18 credits in core statistics courses, 7 credits in core public health courses, 6 credits in elective courses, and 2 credits in consulting.

Admission Considerations

The courses listed below (or course equivalents) are prerequisites for admission consideration and must appear on the student's transcript. Students may apply to the program only after they have fulfilled this requirement:

Code	Title	Credits
MATH 1231	Single-Variable Calculus I	
MATH 1232	Single-Variable Calculus II	
STAT 2118	Regression Analysis	

Applicants lacking the courses listed below (or course equivalents) are considered for admission; however, if admitted, the student is required to complete these courses within two semesters of matriculation in the program. Credit earned in these courses does not count toward the 33 credits required for the degree and grades earned are not reflected in the overall grade-point average.

Code	Title	Credits
MATH 2184	Linear Algebra I	
MATH 2233	Multivariable Calculus	

One of the following:

PUBH 6249	Use of Statistical Packages: Data Management and Data Analysis
STAT 2183	Intermediate Statistics Lab/Packages

Degree Requirements

Code	Title	Credits
Required statistics courses		
STAT 6201	Mathematical Statistics I	
STAT 6202	Mathematical Statistics II	
STAT 6210	Data Analysis	
STAT 6227	Survival Analysis	
PUBH 6265	Design of Medical Studies	
PUBH 6266	Biostatistical Methods (Basis for Master's Comprehensive Examination)	

Required public health courses		
PUBH 6003	Principles and Practices of Epidemiology	
PUBH 6299	Topics in Epidemiology and Biostatistics (2 credits)	

Two courses selected from the following:

PUBH 6262	Introduction to Geographic Information Systems
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PUBH 6268	Advanced SAS
PUBH 6282	Introduction to R Programming

Approved Electives

6 credits in elective courses selected from the following:

PUBH 6121	Environmental and Occupational Epidemiology
PUBH 6242	Clinical Epidemiology and Public Health: Reading the Research
PUBH 6244	Cancer Epidemiology
PUBH 6245	Infectious Disease Epidemiology
PUBH 6250	Epidemiology of HIV/AIDS
PUBH 6252	Advanced Epidemiology Methods

PUBH 6281	Analysis of Complex Surveys Using SAS and Stata
STAT 3187	Introduction to Sampling
STAT 4181	Applied Time Series Analysis
STAT 4188	Nonparametric Statistics Inference
STAT 6197	Fundamentals of SAS Programming for Data Management
STAT 6215	Applied Multivariate Analysis I
STAT 6216	Applied Multivariate Analysis II
STAT 6217	Design of Experiments
STAT 6223	Bayesian Statistics: Theory and Applications
STAT 6231	Categorical Data Analysis
STAT 6242	Modern Regression Analysis
STAT 6287	Sample Surveys
STAT 8226	Advanced Biostatistical Methods
STAT 8265	Multivariate Analysis
STAT 8273	Stochastic Processes I
STAT 8281	Advanced Time Series Analysis
STAT 8288	Topics in Sample Surveys
Consulting	
PUBH 6258	Advanced Topics in Biostatistical Consulting
PUBH 6283	Biostatistics Consulting Practicum

The Master's Comprehensive Examination

The master's comprehensive examination is a written exam in the field of biostatistics and is based on the content covered in PUBH 6266 Biostatistical Methods. It is administered by the faculty of the Department of Epidemiology and Biostatistics in the Milken Institute School of Public Health.