

## BIOSTATISTICS MS, MPH

The Biostatistics (BIO) master's degree programs use statistical skills to put numbers into context as part of public health research for solving human health-related problems. With an MS or and MPH in biostatistics, you'll collaborate in the design of biomedical studies, analyze data, and put the results in context for researchers.

The MS program takes two years for full-time students and requires a minimum of 33 credits. The MPH can also be completed within two years, but may require more time because of additional coursework. It requires a minimum of 42 credits.

### MS DEGREE PROGRAM

#### YEAR ONE

##### FALL SEMESTER

**PubH 6250** Foundations of Public Health (2 cr)  
**PubH 7405** Biostatistics: Regression (4 cr)  
**STAT 5101 or 8101** Theory of Statistics I (3 or 4 cr)

##### SPRING SEMESTER

**PubH 7406** Biostatistics: Design and ANOVA (4 cr)  
**STAT 5102 or 8102** Theory of Statistics II (3 or 4 cr)

##### MAY (AFTER FINALS)

MS Written Examination

#### YEAR TWO

##### FALL SEMESTER

**PubH 7450** Survival Analysis (3 cr)  
 Biostatistics electives

##### SPRING SEMESTER

**PubH 7420** Clinical Trials (3 cr)  
**PubH 7494** Integrated Learning Experience (3 cr)  
 Biostatistics elective

#### BIOSTATISTICS ELECTIVES

SELECT A MINIMUM OF 8 CREDITS FROM THE FOLLOWING LIST

**PubH 7430** Statistical Methods for Correlated Data (3 cr)  
**PubH 7435** Latent Variable Models (3 cr)  
**PubH 7440** Introduction to Bayesian Data Analysis (3 cr)  
**PubH 7445** Statistics in Genetics & Molecular Biology (3 cr)  
**PubH 7460** Advanced Statistical Computing (3 cr)  
**PubH 7461** Exploring and Visualizing Data in R (2 cr)  
**PubH 7462** Adv. Programming & Data Analysis in R (2 cr)  
**PubH 7465** Biostatistical Consulting (3 cr)  
**PubH 7470** Stats for Translational & Clinical Research (3 cr)  
**PubH 7475** Statistical Learning and Data Mining (3 cr)  
**PubH 7485** Methods for Causal Inference (3 cr)  
**PubH 8422** Modern Non-parametrics (3 cr)  
**PubH 8472** Spatial Biostatistics (3 cr)  
**MATH 5615H** Honors: Introduction to Analysis I (4 cr)  
**MATH 5616H** Honors: Introduction to Analysis II (4 cr)  
**STAT 5401** Applied Multivariate Methods (3 cr)  
**STAT 5601** Nonparametric Methods (3 cr)  
**GEOG 5561** Principles of Geographic Info Science (4 cr)  
**GIS 5571** Introduction to Arc/Info (3 cr)

## MPH DEGREE PROGRAM

The Biostatistics Master of Public Health (MPH) program has different course requirements than the MS program. The entrance requirements are the same for both the MPH and the MS programs.

MPH students intending to take more Biostatistics electives or continue with a PhD may need more time to complete both their required coursework and the PhD prerequisites. For these reasons, the majority of students in the Biostatistics program choose the MS program instead of the MPH.

## PUBLIC HEALTH CORE REQUIREMENTS

12 CREDITS

*The basic curriculum courses are offered online and on-campus:*

**PubH 6020** Fundamentals of Social and Behavioral Science (2 cr)

**PubH 6101** Environmental Health (2 cr) **or**

**PubH 6102** Issues in Environmental & Occupational Health (2 cr)

**PubH 6250** Foundations of Public Health (2 cr)

**PubH 6320** Fundamentals of Epidemiology (3 cr) **or**

**PubH 6341** Epidemiologic Methods I (3 cr)

**PubH 6741** Ethics in Public Health: Professional Practice and Policy (1 cr)

**PubH 6751** Management in Health Services Organizations (2 cr)

## BIOSTATISTICS CORE REQUIREMENTS

22 CREDITS

**PubH 7405** Biostatistics: Regression (4 cr)

**PubH 7406** Biostatistics: Design and ANOVA (4 cr)

**PubH 7420** Clinical Trials (3 cr)

**PubH 7450** Survival Analysis (3 cr)

**STAT 5101** Theory of Statistics I (4 cr)

**STAT 5102** Theory of Statistics II (4 cr)

## APPLIED PRACTICE EXPERIENCE

**PubH 7496** (1-3 credits)

## INTEGRATED LEARNING EXPERIENCE

**PubH 7494** (1-3 credits)

## ELECTIVES TO TOTAL 42 CREDITS

The Biostatistics MPH program requires a minimum of 42 credits. Beyond the required courses mentioned above, additional credits may be taken (in consultation with your adviser) from any of the following: graduate-level courses related to Biostatistics, Statistics, or Public Health.

### PROGRAM COORDINATOR

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