*Effective Summer 2022*

THE OHIO STATE UNIVERSITY
COLLEGE OF PUBLIC HEALTH

# 2022-2023 Curriculum Guide for Master of Science degree program with a specialization in BIOSTATISTICS

The Master of Science (MS) degree is intended for students whose interests in biostatistics are academically oriented rather than directed toward professional practice. MS graduates will have the knowledge and skills to participate in basic and applied research and will have the foundation to enter into a research-oriented career. The MS degree may also serve as an entry point for students who are qualified to pursue a PhD degree which requires broader scope and depth of content via additional didactic courses and more intensive research emphasis. The MS degree requires preparation and defense of a thesis on Biostatistical methods/applications. The MS degree typically can be completed within two years.

Students admitted to the MS degree program are assigned a faculty advisor who will provide guidance throughout the program. This document serves as a resource to be used by the student and the advisor in planning a program with a specialization in Biostatistics, but is not inclusive of all important degree, college, and university requirements. All students are expected to be familiar with the College of Public Health (CPH) *Graduate Student Handbook*: http://cph.osu.edu/students/graduate/handbooks , the *Graduate School Handbook* http://www.gradsch.ohio-state.edu/ and the CPH competencies: https://go.osu.edu/cphcompetencies.

## *PROGRAM OF STUDY*

The MS Biostatistics curriculum consists of a minimum of 45 credits.

**Required Foundation Courses (9 credits)**

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|---|---|---|
| PUBHLTH 6010 | Essentials of Public Health | 3 credits |
| PUBHBIO 6210 | Applied Biostatistics I | 3 credits |
| PUBHEPI 6410 | Principles of Epidemiology | 3 credits |

**Required Specialization Courses (17 credits)**

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|---|---|---|
| PUBHBIO 6211 | Applied Biostatistics II | 3 credits |
| PUBHBIO 6270 | Introduction to SAS for Public Health Students | 2 credits |
| PUBHBIO 7245/STAT 7755 | Biostatistical Collaboration | 2 credits |
| STAT 6301 | Probability for Statistical Inference | 3 credits |
| STAT 6302 | Theory of Statistical Analysis | 3 credits |
| STAT 6450 | Applied Regression Analysis | 4 credits |

**Electives** (13 credits)

Choose a minimum of 13 credits from this list, or other courses approved by the advisor.

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|---|---|---|
| PUBHBIO 5280 | Introduction to Genomic Data Analysis | 3 credits |
| PUBHBIO 7215 | Design and Analysis of Clinical Trials | 2 credits |
| PUBHBIO 7220 | Applied Logistic Regression | 3 credits |
| PUBHBIO 7225/STAT 6510 | Survey Sampling Methods | 3 credits |
| PUBHBIO 7230 | Applied Longitudinal Analysis | 3 credits |
| PUBHBIO 7235/STAT 6605 | Applied Survival Analysis | 3 credits |
| PUBHBIO 7240/STAT 6520 | Applied Statistical Analysis with Missing Data | 3 credits |
| PUBHBIO 7255 | Introduction to Causal Inference | 3 credits |
| PUBHBIO 8450 | Stochastic Epidemic Models | 3 credits |
| STAT 6625 | Statistical Analysis of Genetic Data | 3 credits |
| STAT 6730 | Introduction to Computational Statistics | 2 credits |

**Thesis** (6 credits)

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|---|---|---|
| PUBHLTH 7999 | Thesis Research in Public Health | 6 credits |

## *Sample Curriculum Plan for the Master of Science in Biostatistics*

(THIS IS ONE OPTION, STUDENTS ARE ADVISED TO CONSULT WITH THEIR ADVISOR FOR OTHER OPTIONS)

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|---|---|---|---|
| **Year 1 Autumn** | PUBHBIO 6210 | Applied Biostatistics I | 3 credits |
| | PUBHBIO 6270 | Introduction to SAS for Public Health Students | 2 credits |
| | STAT 6301 | Probability for Statistical Inference | 3 credits |
| | PUBHEPI 6410 | Principles of Epidemiology | 3 credits |
| **Year 1 Spring** | PUBHBIO 6211 | Applied Biostatistics II | 3 credits |
| | STAT 6450 | Applied Regression Analysis | 4 credits |
| | STAT 6302 | Theory of Statistical Analysis | 3 credits |
| | PUBHLTH 6010 | Essentials of Public Health | 3 credits |
| **Year 2 Autumn** | PUBHLTH 7999 | Thesis Research in Public Health | 3 credits |
| | Elective | | 3 credits |
| | Elective | | 3 credits |
| | Elective | | 3 credits |
| **Year 2 Spring** | PUBHLTH 7999 | Thesis Research in Public Health | 3 credits |
| | PUBHBIO 7245/STAT 7755 | Biostatistical Collaboration | 2 credits |
| | Elective | | 3 credits |
| | Elective | | 1 credit |

**Grade Policy:**

In addition to the general Graduate School requirements of a cumulative grade point average of 3.0 or higher, students must meet specific college policies regarding grades in Foundation and specialization courses. Students should familiarize themselves with Section 11 of the College of Public Health Graduate Student Handbook.

**College of Public Health - Office of Academic Programs and Student Services (OAPSS)**

OAPSS staff are available to provide assistance with College, Graduate School and University policies and procedures. (614) 292-8350/100 Cunz Hall/1841 Neil Ave/Columbus, Ohio/ 43210/cph.osu.edu

********Questions regarding the student's program of study should be directed to their advisor********