THE OHIO STATE UNIVERSITY
COLLEGE OF PUBLIC HEALTH

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

The MPH degree program is designed to provide students with the knowledge and skills for general and specialized applied public health practice, both in the public sector and in private sector careers related to population health. It includes courses within public health's foundation disciplines of biostatistics, environmental health science, epidemiology, health behavior & health promotion, and health services management and policy. This broad training is complemented by the more in-depth course work within the specialization including an applied practice experience and integrative learning project.

Students admitted to the Master of Public Health (MPH) 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 MPH-Biostatistics curriculum consists of a minimum of 45 credits organized into five curricular domains:

1. MPH Integrated Foundational curriculum (12 credits)
2. Required courses for the specialization (12 credits)
3. Elective courses (16 credits)
4. Applied Practice Experience (2 credits)
5. Integrative Learning Experience (3 credits)

### **MPH Integrated Foundational curriculum** ǂ (12 credits)

Every student in the MPH-Biostatistics program must take the following MPH Integrated Foundational curriculum:

| | | |
|---|---|---|
| PUBHTLH 6001 | Methods in Quantitative Data Analysis | 4 credits |
| PUBHLTH 6002 | History, Values and Essential Services of the U.S. Public Health System | 2 credits |
| PUBHLTH 6003 | Methods in Public Health Planning and Evaluation | 2 credits |
| PUBHLTH 6004 | Essentials of Population Health | 4 credits |

### **Biostatistics Specialization Courses** (12 credits)

| | | |
|---|---|---|
| PUBHBIO 6260 | Ethics in Biostatistics | 1 credit |
| 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 6450 | Applied Regression Analysis | 4 credits |

### **Electives** (16 credits)

Select a minimum of 16 credits from this list. Other courses may be approved to fulfill this requirement with permission of the advisor:

| | | |
|---|---|---|
| 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 Data Analysis | 3 credits |
| PUBHBIO 7235/STAT 6605 | Applied Survival Analysis | 3 credits |

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

| | | |
|---|---|---|
| PUBHBIO 7240/STAT 6520 | Applied Statistical Analysis with Missing Data | 3 credits |
| PUBHBIO 7255 | Introduction to Causal Inference in Health Science Research | 3 credits |
| PUBHBIO 8450 | Stochastic Epidemic Models | 3 credits |
| PUBHEPI 6431 | Design & Implementation of Health Surveys | 3 credits |
| PUBHLTH 5015 | Public Health Data Analytics I | 3 credits |
| STAT 6625 | Statistical Analysis of Genetic Data | 3 credits |
| STAT 6730 | Introduction to Computational Statistics | 2 credits |

**Applied Practice Experience**

| | | |
|---|---|---|
| PUBHLTH 7189 | Applied Practice Experience in Public Health | 2 credits |

**Integrative Learning Experience**

| | | |
|---|---|---|
| PUBHLTH 7998 | Integrative Learning Experience in Public Health | 3 credits |

### *Sample Curriculum Plan for the Master of Public Health in Biostatistics*

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

| | | | | |
|---|---|---|---|---|
| **Year 1 Autumn** | PUBHLTH 6001ǂ | Methods in Quantitative Data Analysis | 4 credits | AU |
| | PUBHLTH 6002ǂ | History, Values and Essential Services of the U.S. Public Health System | 2 credits | AU |
| | PUBHBIO 6260 | Ethics in Biostatistics | 1 credit | AU |
| | PUBHBIO 6270 | Introduction to SAS for Public Health students | 2 credits | AU, SP |
| | PUBHBIO 7215* or other Elective | Design and Analysis of Clinical Trials | 2 credits | AU |
| **Year 1 Spring** | PUBHLTH 6003ǂ | Methods in Public Health Planning and Evaluation | 2 credits | SP |
| | PUBHLTH 6004ǂ | Essentials of Population Health | 4 credits | SP |
| | PUBHBIO 6211 | Applied Biostatistics II | 3 credits | AU, SP |
| | STAT 6450 | Applied Regression Analysis | 4 credits | |
| **Year 2 Autumn** | PUBHLTH 7189^ | Applied Practice Experience | 2 credits | ANY |
| | ELECTIVE(S) | SELECT 3 PRE-APPROVED ELECTIVE COURSES | 8-9 credits | AU, SP |
| **Year 2 Spring** | PUBHLTH 7998 | Integrative Learning Experience in Public Health | 3 credits | ANY |
| | PUBHBIO 7245/STAT 7755 | Biostatistical Collaboration | 2 credits | SP |
| | ELECTIVE(S) | SELECT 2 PRE-APPROVED ELECTIVE COURSES | 5-6 credits | |

*ǂPUBHLTH 6001-6004: Students will be enrolled by The College of Public Health Office of Academic Programs and Student Services for these courses.*

**PUBHBIO 7215 is the recommended elective to take in the first semester; a different elective may be selected in consultation with the faculty advisor.*
*^The Applied Practice Experience (Public Health 7189) is to be completed Autumn Semester of Year 2. It may be completed during Summer or Spring with approval from the faculty advisor.*

**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.

**Office of Academic Programs and Student Services (OAPSS)**

OAPSS staff are available to provide assistance with College, Graduate School and University policies and procedures. Students can make an appointment with a staff member in OAPSS by calling (614) 292-8350.
OAPSS address: 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********