

## 2021-2022 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)**

PUBHLTH 6010	Essentials of Public Health	3 credits
PUBHBIO 6210	Design & Analysis of Studies in the Health Sciences I	3 credits
PUBHEPI 6410	Principles of Epidemiology	3 credits

#### **Required Specialization Courses (17 credits)**

PUBHBIO 6211	Design & Analysis of Studies in the Health Sciences 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.

PUBHBIO 5280	Introduction to Genomic Data Analysis	2 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)

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)

<b>Year 1 Autumn</b>	PUBHBIO 6210	Design & Analysis of Studies in the Health Sciences 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
<b>Year 1 Spring</b>	PUBHBIO 6211	Design & Analysis of Studies in the Health Sciences 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
<b>Year 2 Autumn</b>	PUBHLTH 7999	Thesis Research in Public Health	3 credits
	Elective		3 credits
	Elective		3 credits
	Elective		3 credits
<b>Year 2 Spring</b>	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](http://cph.osu.edu)

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