2019-2020 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 a practicum and culminating experience.

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](http://cph.osu.edu/students/graduate/handbooks), the Graduate School Handbook [http://www.gradsch.ohio-state.edu/](http://www.gradsch.ohio-state.edu/) and the CPH competencies: [https://go.osu.edu/cphcompetencies](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. **Foundation courses in areas of knowledge basic to public health** (15 credits)
2. **Required courses for the specialization** (11 credits)
3. **Elective courses** (14 credits)
4. **Practicum** (2 credits)
5. **Culminating project** (3 credits)

### Public Health Foundation Courses (15 credits)

Every student in the MPH-Biostatistics program must take the following courses in areas of knowledge basic to public health:

<table>
<thead>
<tr>
<th>Biostatistics</th>
<th>Design and Analysis of Studies in the Health Sciences</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHBIO 6210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Health Sciences</td>
<td>Principles of Environmental Health Science</td>
<td>3 credits</td>
</tr>
<tr>
<td>PUBHEHS 6310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epidemiology</td>
<td>Principles of Epidemiology</td>
<td>3 credits</td>
</tr>
<tr>
<td>PUBHEPI 6410</td>
<td></td>
<td></td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>Preventing Disease and Promoting Health through Behavioral Science</td>
<td>3 credits</td>
</tr>
<tr>
<td>PUBHHBP 6510</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Services Administration</td>
<td>Introduction to Health Care Organization</td>
<td>3 credits</td>
</tr>
<tr>
<td>PUBHMP 6610</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Biostatistics Specialization courses (11 credits)

<table>
<thead>
<tr>
<th>Biostatistics</th>
<th>Design &amp; Analysis of Studies in the Health Sciences II</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHBIO 6211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUBHBIO 6270</td>
<td>Introduction to SAS for Public Health students</td>
<td>2 credits</td>
</tr>
<tr>
<td>PUBHBIO 7245/STAT 7755</td>
<td>Biostatistical Collaboration</td>
<td>2 credits</td>
</tr>
<tr>
<td>STAT 6450</td>
<td>Applied Regression Analysis</td>
<td>4 credits</td>
</tr>
</tbody>
</table>

*****Questions regarding the student’s program of study should be directed to their advisor*****
**Electives: (14 credits)**
Select a minimum of 14 credits from this list. Other courses may be approved to fulfill this requirement with permission of the advisor:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHBIO 5280</td>
<td>Introduction to Genomic Data Analysis</td>
<td>2</td>
</tr>
<tr>
<td>PUBHBIO 7215</td>
<td>Design and Analysis of Clinical Trials</td>
<td>2</td>
</tr>
<tr>
<td>PUBHBIO 7220</td>
<td>Applied Logistic Regression</td>
<td>3</td>
</tr>
<tr>
<td>PUBHBIO 7225/STAT 6510</td>
<td>Survey Sampling Methods</td>
<td>3</td>
</tr>
<tr>
<td>PUBHBIO 7230</td>
<td>Applied Longitudinal Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PUBHBIO 7235/STAT 6605</td>
<td>Applied Survival Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PUBHBIO 7240/STAT 6520</td>
<td>Applied Statistical Analysis with Missing Data</td>
<td>3</td>
</tr>
<tr>
<td>PUBHBIO 7255</td>
<td>Introduction to Causal Inference</td>
<td>3</td>
</tr>
<tr>
<td>PUBHBIO 8450</td>
<td>Stochastic Epidemic Models</td>
<td>3</td>
</tr>
<tr>
<td>PUBHEPI 6431</td>
<td>Design &amp; Implementation of Health Surveys</td>
<td>3</td>
</tr>
<tr>
<td>STAT 6625</td>
<td>Statistical Analysis of Genetic Data</td>
<td>3</td>
</tr>
<tr>
<td>STAT 6730</td>
<td>Introduction to Computational Statistics</td>
<td>2</td>
</tr>
</tbody>
</table>

**Practicum**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 7189</td>
<td>Practicum in Public Health</td>
<td>2</td>
</tr>
</tbody>
</table>

**Culminating Project**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHLTH 7998</td>
<td>Culminating Project in Public Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**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)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Autumn</th>
<th>PUBHBIO 6210</th>
<th>PUBHEPI 6410</th>
<th>PUBHBIO 6270</th>
<th>CPH FOUNDATION COURSE</th>
<th>Design and Analysis of Studies in the Health Sciences</th>
<th>Principles of Epidemiology</th>
<th>Data Management &amp; Graphics for Stat Analysis</th>
<th>PUBHEHS 6310 OR PUBBHP 6510 OR PUBHHMP 6610</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 credits</td>
<td>3 credits</td>
<td>2 credits</td>
<td>3 credits</td>
<td>AU, SP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Spring</th>
<th>PUBHBIO 6211</th>
<th>STAT 6450</th>
<th>ELECTIVE</th>
<th>CPH FOUNDATION COURSE</th>
<th>Design &amp; Analysis of Studies in the Health Sciences II</th>
<th>Applied Regression Analyses</th>
<th>SELECT 1 PRE-APPROVED ELECTIVE COURSE</th>
<th>PUBHEHS 6310 OR PUBBHP 6510 OR PUBHHMP 6610</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 credits</td>
<td>4 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>AU, SP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Autumn</th>
<th>PUBHLTH 7189^</th>
<th>ELECTIVE(S)</th>
<th>CPH FOUNDATION COURSE</th>
<th>Practicum in Public Health</th>
<th>SELECT 1 OR 2 PRE-APPROVED ELECTIVE COURSES</th>
<th>PUBHEHS 6310 OR PUBBHP 6510 OR PUBHHMP 6610</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ANY</td>
<td>6 credits</td>
<td>3 credits</td>
<td>ANY, AU, SP</td>
</tr>
</tbody>
</table>

| Year 2          | Spring | PUBHLTH 7998 | PUBHBIO 7245/STAT 7755 | ELECTIVE(S) | Culminating Project in Public Health | Biostatistical Collaboration | SELECT 2 PRE-APPROVED ELECTIVE COURSES | Credits | SP |
|-----------------|--------|--------------|-----------------------|-------------|---------------------------------|----------------------------|------------------------------------------------|---------|    |
|                  |        |              |                       |             | 3 credits                       | 2 credits                          | 5-6 credits                          | ANY, SP |

^Practicum (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*****