2019-2020 Curriculum Guide for Master of Public Health degree program with a specialization in Biomedical Informatics

The Master of Public Health (MPH) degree is intended for students whose interests in Biomedical Informatics (BMI) are oriented towards professional practice within the public health and/or healthcare domains.

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 Biomedical Informatics, 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/competencies](https://go.osu.edu/competencies).

**PROGRAM OF STUDY**

The MPH-BMI curriculum consists of a minimum of 48 credits organized into five curricular domains:

1. Foundation courses in areas of knowledge basic to public health (15 credits)
2. Specialization courses (19-20 credits)
3. Elective courses (8-9 credits)
4. Practicum (2 credits)
5. Culminating project (3 credits)

**Required Foundation Courses** (15 credits)

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHBIO 6210</td>
<td>Design and Analysis of Studies in the Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>PUBHEHS 6310</td>
<td>Principles of Environmental Health Science</td>
<td>3</td>
</tr>
<tr>
<td>PWBHEP 6410</td>
<td>Principles of Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PUBHHBP 6510</td>
<td>Preventing Disease and Promoting Health through Behavioral Science</td>
<td>3</td>
</tr>
<tr>
<td>PUBHMP 6610</td>
<td>Introduction to Health Care Organization</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required Specialization courses** (19-20 credits)

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBHBIO 6211</td>
<td>Design &amp; Analysis of Studies in the Health Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>BMI 5710</td>
<td>Introduction to Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>BMI 5740</td>
<td>Introduction to Research Informatics</td>
<td>3</td>
</tr>
<tr>
<td>BMI 5760</td>
<td>Introduction to Public Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>BMI 7000+</td>
<td>Advanced Coursework in Biomedical Informatics</td>
<td>3</td>
</tr>
<tr>
<td>BMI 7891</td>
<td>Seminars in Biomedical Informatics</td>
<td>2</td>
</tr>
</tbody>
</table>

**Ethics course requirement**

**Select one course:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOETHIC 6010</td>
<td>Biomedical Research Ethics</td>
<td>3</td>
</tr>
<tr>
<td>BIOPHARM 7510</td>
<td>Professional and Ethical Issues in Biomedical Sciences</td>
<td>2</td>
</tr>
<tr>
<td>NURSING 7781</td>
<td>Responsible Conduct of Research</td>
<td>3</td>
</tr>
<tr>
<td>SURGERY 8814</td>
<td>Responsible Conduct of Research: Human Participants and the Use of Animals in Biomedical Research</td>
<td>2</td>
</tr>
</tbody>
</table>
Students with a background in public health or medicine are encouraged to focus on computer science (CSE) electives to enhance their computational abilities. Similarly, students with backgrounds in computer science, electrical engineering, or information technology are encouraged to focus their electives to enhance their understanding of medicine and public health. Students should work with staff and faculty advisors in the Department of Biomedical Informatics to identify suitable electives.

### Practicum (2 credits)

- **PUBLTH 7189** Practicum in Public Health  
  2 credits

### Culminating Project (3 credits)

- **PUBLTH 7998** Culminating Project in Public Health  
  3 credits

## Sample Curriculum Plan for the Master of Public Health in Biomedical Informatics

### Year 1

#### Autumn

- **PUBHBIO 6210**  
- **PUBHHBP 6510**  
- **PUBHHMP 6610**  
- **BMI 5710**  
- **BMI 7891**

- Design and Analysis of Studies in the Health Sciences I  
  Preventing Disease and Promoting Health through Behav Sci  
  Introduction to Health Care Organization  
  Introduction to Biomedical Informatics  
  Seminar in Biomedical Informatics  
  3 credits  
  3 credits  
  3 credits  
  3 credits  
  0-1 credit

#### Spring

- **PUBHBIO 6211**  
- **PUBHEPI 6410**  
- **BMI 5740**  
- **BMI 7891**

- Design & Analysis of Studies in the Health Sciences II  
  Principles of Epidemiology  
  Introduction to Research Informatics  
  Seminar in Biomedical Informatics  
  3 credits  
  3 credits  
  3 credits  
  0-1 credit

#### Summer

- **PUBLTH 7189** ELECTIVE

- Practicum  
  Recommend: 5750 Methods in Biomedical Informatics  
  2 credits  
  3 credits

### Year 2

#### Autumn

- **BMI 5760**  
- **BMI 7000+ ELECTIVE**  
- **BMI 7891**  
- **ETHICS COURSE**

- Introduction to Public Health Informatics  
  Advanced Biomedical Informatics Coursework  
  Seminar in Biomedical Informatics  
  3 credits  
  3 credits  
  3-4 credits  
  0-1 credit

#### Spring

- **PUBLTH 7998**  
- **PUBHEHS 6310 ELECTIVE**  
- **BMI 7891**

- Culminating Project in Public Health  
  Principles of Environmental Health Science  
  Seminar in Biomedical Informatics  
  3 credits  
  3 credits  
  3-4 credits  
  0-1 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