

### **Program Director**

Kate Applebaum, ScD, MSPH  
Associate Professor  
Department of Environmental and Occupational Health  
950 New Hampshire Avenue, NW  
Washington, DC 20052  
Telephone: 202-994-8043  
Email: [kapplebaum@gwu.edu](mailto:kapplebaum@gwu.edu)

### **Mission**

The mission of the Environmental Health Science and Policy MPH program is to educate individuals who are committed to public health protection to apply critical analytic skills to the development, implementation and evaluation of practices and policies aimed at preventing or minimizing the adverse impact of environmental and occupational hazards on human health.

### **Goals**

Our graduates will possess a multidisciplinary knowledge base and skill set that will provide them a framework for addressing environmental and occupational health (EOH) issues. They will understand three distinct scientific foundations of environmental health in order to:

- ◆ Assess and control environmental and occupational exposures;
- ◆ Understand the effects of these exposures on human health; and
- ◆ Interpret epidemiologic and other research findings related to environmental risks.

Furthermore, graduates will be prepared to build on this science base in order to:

- ◆ Analyze policy implications and participate in policy development, implementation and evaluation; and
- ◆ Assess and manage environmental and occupational risks.

### **Course Requirements**

All Milken Institute School of Public Health (SPH) MPH students who select the Environmental Health Science and Policy program enroll in Core Courses (19 credits) to include the Culminating Experience, Program-Specific Courses (18 credits), and Electives (8 credits).

### **Program-Specific Competencies**

Upon completion of the MPH Program in Environmental Health Science and Policy, students should possess the following functional competencies.

- Identify the adverse human health effects of chemical, biological, and physical hazards
  - Courses: PubH 6123, PubH 6122
- Conduct and interpret data analyses of environmental or occupational exposures or health outcomes
  - Courses: PubH 6131, PubH 6121, PubH 6853

- Assess environmental or occupational exposures to evaluate the severity of a chemical, physical, or biological hazard and potential for prevention and control strategies to reduce exposure
  - Courses: PubH 6131, PubH 6126
- Evaluate observational studies that examine the relationship between environmental or occupational exposures and health, including biases and study limitations
  - Courses: PubH 6131, PubH 6121
- Demonstrate knowledge of processes through which science-based policies are developed to address environmental or occupational health issues
  - Course: PubH 6122
- Synthesize information to assess and manage environmental or occupational risks and engage in public health risk communication
  - Courses: PubH 6123, PubH 6124

*Begin Planning Your Culminating Project 11-12 Months Prior to Program Completion*

**Required Core Courses  
19 Credits**

| Required Core Course |  | Credits   | Semester Offered     | Grade |
|----------------------|--|-----------|----------------------|-------|
| PUBH 6000            | MPH Applied Practice Experience  | 0         | Fall, Spring, Summer |       |
| PUBH 6002            | Biostatistical Applications for Public Health  | 3         | Fall, Spring, Summer |       |
| PUBH 6003            | Principles and Practice of Epidemiology  | 3         | Fall, Spring, Summer |       |
| PUBH 6007            | Social and Behavioral Approaches to Public Health  | 2         | Fall, Spring, Summer |       |
| PUBH 6009            | Fundamentals of Program Evaluation   | 2         | Fall, Spring, Summer |       |
| PUBH 6011            | Environmental & Biological Fundamentals of Public Health   | 3         | Fall, Spring, Summer |       |
| PUBH 6012            | Fundamentals of Health Policy  | 2         | Fall, Spring, Summer |       |
| PUBH 6021            | Essentials of Public Health Leadership & Practice 1: Leading Self and Teams in Public Health                         | 1         | Fall, Spring, Summer |       |
| PUBH 6022            | Essentials of Public Health Leadership & Practice 2: Managing Organizations and Influencing Systems in Public Health | 1         | Fall, Spring, Summer |       |
| PUBH 6023            | Interprofessional Education Experience   | 0         | Fall, Spring, Summer |       |
| PUBH 6137            | EOH Culminating Experience Part 1  | 1         | Fall                 |       |
| PUBH 6138            | EOH Culminating Experience Part 2  | 1         | Spring               |       |
| <b>Total</b>         | <b>Core Credits</b>  | <b>19</b> |                      |       |

**Required Program-Specific Courses  
18 Credits**

| Required Program Specific Course |  | Credits | Semester Offered | Grade |
|----------------------------------|--|---------|------------------|-------|
| PUBH 6121                        | Environmental and Occupational Epidemiology                                    | 3       | Fall             |       |
| PUBH 6122                        | Protecting Public Health and the Environment: Policies, Politics, and Programs | 3       | Spring           |       |
| PUBH 6123                        | Toxicology: Applications for Public Health Policy                              | 3       | Spring           |       |
| PUBH 6124                        | Risk Management and Communication  | 3       | Spring           |       |
| PUBH 6126                        | Assessment and Control of Environmental Hazards                                | 3       | Fall             |       |
| PUBH 6131                        | Quantitative Methods in Environmental and Occupational Health                  | 3       | Spring           |       |

**Electives  
Select 8 Credits from graduate-level PUBH courses**

*Recommended to take at least 4 of the 8 credits from the EOH department.*

|                      |  |                   |                      |  |
|----------------------|--|-------------------|----------------------|--|
| PUBH 6xxx            |  | 8 credits         | Fall, Spring, Summer |  |
| <b>TOTAL PROGRAM</b> |  | <b>45 credits</b> |                      |  |

# MPH Graduation Requirements

1. **Graduate Credit Requirement:** 45 graduate credits are required.
2. **Course Requirements:** Successful completion of the Core Courses (19 credits) and the Program-Specific Courses (18 credits) are required.
3. **Grade Point Requirement:** A 3.0 (B average) overall grade point average is required.
4. **Time Limit Requirement:** The degree must be completed within five years.
5. **Practicum Requirement:** Students are required to fulfill all requirements of the Applied Practice Experience.
6. **Interprofessional Education Experience (IPE):** Students are required to enroll and participate in an authorized IPE activity (PUBH 6023).
7. **Transfer Credit Policy:** Up to 12 graduate credits that have not been applied to a previous degree may be transferred to the MPH upon approval. Up to 18 credits may be transferred to the MPH from the Milken Institute SPH Graduate Certificate. Credits must have been earned from an accredited institution in the last 3 years with a grade point of 3.0 or better.
8. **CITI Training Requirement:** All students are required to complete training regarding human subject protection regulation and the Health Insurance Portability and Accountability Act of 1996 (HIPAA). To fulfill this requirement, you must complete the Collaborative IRB Training Initiative (CITI) Course in The Protection of Human Research Subjects.
9. **Integrity Quiz & Plagiarism Requirement:** All students are required to review the George Washington University Code of Academic Integrity and take the quiz within their first semester of study. The Code of Integrity and step-by-step instructions can be found here: <https://publichealth.gwu.edu/integrity>
10. **Professional Enhancement Requirement:** Students must participate in 8 hours per degree program of Public Health-related lectures, seminars, and symposia, related to your field of study. Professional Enhancement activities supplement the academic curriculum and help prepare students to participate actively in the professional community. Opportunities for professional enhancement are regularly publicized via the Milken Institute SPH Listserv and through your department or advisor. Students must submit documentation of Professional Enhancement activities to the Office of Student Records. The documentation consists of the Professional Enhancement Form <http://publichealth.gwu.edu/academics/forms> (which includes a prior approval signature from the student's advisor, a description of the program agenda, and proof of attendance. Remember to submit your documentation before you apply to graduate!

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| <p><b>Environmental Health Science and Policy</b></p> <p><b>Advising Tips</b></p> |
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Milken Institute School

of Public Health

**NOTE: Always see your advisor for course scheduling and sequencing strategies, but remember that proper course registration, fulfilling requirements, and on-time graduation are your responsibilities.**

The Master of Public Health (MPH) curriculum consists of four types of courses:

- ◆ Required Core Courses (PUBH 6000, 6002, 6003, 6007, 6009, 6011, 6012, 6021, 6022, and 6023)
- ◆ Required Program-Specific Courses
- ◆ A total of 8 Electives from any SPH graduate credits, preferably with 4 credits from EOH-focused courses.
- ◆ Required Culminating Experience

As an accredited School of Public Health, students in all GWSPH MPH programs are required to fulfill both an interprofessional team experience and an applied practice experience, included in the core. GWSPH has incorporated these requirements into the curriculum as follows:

**Interprofessional Education (IPE) Experience (PUBH 6023):**

MPH students are required to select an IPE experience from a host of options provided throughout enrollment to participate in a one-time, case-based or activity-based learning experience. The IPE experience is a way to actively participate in a supervised environment to work with people from other professions/programs outside of public health. Students are eligible to enroll in the IPE upon successful completion of most of the MPH core coursework including: PUBH 6002, 6003, 6007, 6011, 6012 and 6021. Students will have many opportunities to register for this zero-credit (no fee) IPE course (PUBH 6023- Interprofessional Education Experience) and will receive credit upon successful completion.

**Applied Practice Experience (Practicum & EPR) (PUBH 6000):**

The Applied Practice Experience (APEX) may be satisfied with either a practicum or, for experienced public health professionals, through an expedited portfolio review (EPR).

The practicum is a planned, supervised, and evaluated practice experience that aims to provide students with an opportunity to synthesize, integrate, and apply practical skills, knowledge, and training learned through courses, to gain applied experience in a professional public health work environment, and to work on public health practice projects that are of particular interest to you. Information about the Practicum will be introduced through school-wide Practicum Information Sessions held by the Office of Applied Public Health and through meetings with your department practicum staff and faculty.

During the practicum, you will work at least 120 hours in the field under the supervision of the site preceptor who has agreed to directly supervise the work you are conducting. Students are required to fulfill all requirements of the 120-hour practicum to receive credit for PUBH 6000.

If you have had prior work experience, then you will find that the practicum provides the opportunity to hone skills or to gain new experience in a different area. However, if you have substantial public health experience relevant to your department/track, including 5+ years of full-

time public health work for students after receiving your undergraduate degree, or 3+ years of full-time work for students who already have a graduate degree prior to beginning the MPH, then you may be able to satisfy the APEx requirement through an EPR instead of doing the practicum, with advanced approval by your department's practicum team.

The MPH core courses are designed to provide students with a broad public health context as well as a critical foundation for subsequent coursework. Early completion of these core courses ensures that students will have the base of knowledge to successfully complete the program specific courses and to get as much as possible out of them. As such, entering students are expected to enroll in MPH core courses in accordance with the following guidelines:

- We expect MPH students to complete the MPH core courses in their first year of graduate study (fall/spring/summer), with the exception of the Culminating Experience courses (PUBH 6137 and 6138).
- For Environmental Health Science and Policy MPH students who are full-time, it is important to take PUBH 6002 Biostatistical Applications for Public Health, 6003 Principles and Practice of Epidemiology, 6011 Environmental & Biological Fundamentals of Public Health, and 6021 Essentials of Public Health Practice & Leadership 1: Leading Self and Teams in Public Health in the first semester.

Part-time students (who generally take 5 to 7 credits per semester) will typically concentrate on taking just core courses in their first year, and then take program-specific courses in subsequent years, but should consult with your academic advisor.

In order to help assure that all students complete core courses in the first year of study, Milken Institute SPH will offer all core courses during all three semesters (fall, spring, and summer). This will allow students who wish to complete their MPH degree within two years to do so and will allow every student to make steady progress toward completing the MPH degree.

We recognize that there may be exceptional circumstances that make it difficult for a student to complete core courses in the first year as outlined above. Any such student should discuss this situation with his or her academic advisor.

For additional information and resources regarding registration, course descriptions, schedule of classes, etc. follow this link: <http://publichealth.gwu.edu/academics>.

**Table 1 (full-time students)** and **Table 2 (part-time students)** present sample course schedules that Environmental Health Science & Policy MPH students are required to take during their tenure at the Milken Institute SPH. It is noteworthy that fully 45 credits are required, including core courses (19 credits), program specific courses (18 credits), and electives (8 credits). See below.

**MPH in Environmental Health Science and Policy (45 credits)**

Table 1. Sample Schedule for 5-semester Completion (Fall start / May completion) - All course times are tentative

| Semester                                  | Cr        | Course #  | Course Name  | Time (subject to change)                       |
|---|-----------|-----------|--|--|
| Fall 1 <sup>st</sup> year<br>12 credits   | 3         | PUBH 6002 | Biostatistical Applications for PH   | Mon 3:10 – 6:00 pm or Wed 6:10 – 9:00 pm       |
|   | 3         | PUBH 6003 | Principles and Practice of Epidemiology  | Tues 6:10 – 9:00 pm or Wed 3:10 – 6:00 pm      |
|   | 2         | PUBH 6007 | Social & Behavioral Approaches to PH   | Mon 6:10 – 8:00 pm                             |
|   | 3         | PUBH 6011 | Environmental & Biological Fundamentals of PH  | Tues 3:10 – 6:00 pm                            |
|   | 1         | PUBH 6021 | Essentials of PH Leadership & Practice 1: Leading Self & Teams in PH                         | Thurs 6:10 – 7:00 pm                           |
| Spring 1 <sup>st</sup> year<br>11 credits | 2         | PUBH 6012 | Fundamentals of Health Policy  | TBD  |
|   | 1         | PUBH 6022 | Essentials of PH Leadership & Practice 2: Managing Organizations & Influencing Systems in PH | TBD  |
|   | 3         | PUBH 6123 | Toxicology: Applications for Public Health Policy  | Mon 3:10 – 6:00 pm                             |
|   | 3         | PUBH 6131 | Quantitative Methods in Environmental and Occupational Health                                | Thurs 3:10 – 6:00 pm, Lab Thurs 6:30 – 8:00 pm |
|   | 2         | Electives | Electives  |  |
| Summer 1 <sup>st</sup> year<br>4 credits  | 2         | PUBH 6009 | Fundamentals of Program Evaluation   | TBD  |
|   | 2         | Electives | Electives  |  |
| Fall 2 <sup>nd</sup> year<br>9 credits    | 3         | PUBH 6121 | Environmental & Occupational Epidemiology  | Wed 5:10 – 8:00 pm                             |
|   | 3         | PUBH 6126 | Assessment and Control of Environmental Hazards  | Mon 5:10 – 8:00 pm                             |
|   | 1         | PUBH 6137 | EOH Culminating Experience Course Part 1   | Wed 3:10 - 5:00 pm                             |
|   | 2         | Electives | Electives  |  |
| Spring 2 <sup>nd</sup> year<br>9 Credits  | 3         | PUBH 6122 | Policies, Politics and Programs  | Thurs 6:10 – 9:00 pm                           |
|   | 3         | PUBH 6124 | Risk Management and Communication  | Wed 5:10 – 8:00 pm                             |
|   | 1         | PUBH 6138 | EOH Culminating Experience Part 2  | Wed 3:10 - 5:00 pm                             |
|   | 2         | Electives | Electives  |  |
| <b>TOTAL</b>                              | <b>45</b> |           |  |  |

PUBH 6023- Interprofessional Education Experience (0)- students can register anytime following completion of work in PUBH 6022.  
 PUBH 6000-Typically, students complete the 120 hours of the practicum during the summer months.

A total of 8 credits of electives from graduate courses are required, preferably during last three semesters. Students are recommended to take at least 4 credits from EOH focused courses. EOH Electives include:

PUBH 6127 Germs: Applied Environmental Health Microbiology 2 Spring, Tues 4:10 – 6:00 pm  
PUBH 6128 Global Environmental and Occupational Health 2 Online Spring I and Summer  
PUBH 6130 Sustainable Energy and the Environment 2 Fall, Tues 6:10 - 8:00 pm  
PUBH 6133 Social Dimensions in Climate Change & Health 3 Online Spring I and Summer  
PUBH 6135 Researching Climate Change and Public Health 3 Online Fall and Spring II  
PUBH 6140 Global Climate Change & Air Pollution 2 Summer Thursday 3:45 - 6:00 pm  
PUBH 6146 Microbiomes & Microbial Ecology in Public Health 2 Fall Tuesday 4:10 - 6:00 pm  
PUBH 6199 TOPICS: EOH Data & Modelling 2 Fall Wed 6:10 – 8:00 pm  
PUBH 6199 TOPICS: Veterans Deployment and Environmental Issues 1 Summer  
PUBH 6199 Any 6199 TOPICS course

Table 2. Sample Schedule for 8-semester Completion (Fall start / May completion) - All course times are tentative

| Semester                                 | Cr          | Course #                            | Course Name  | Time (subject to change)   |
|--|-------------|-------------------------------------|--|--|
| Fall 1 <sup>st</sup> year<br>7 credits   | 3<br>3<br>1 | PUBH 6003<br>PUBH 6011<br>PUBH 6021 | Principles and Practice of Epidemiology<br>Environmental & Biological Fundamentals of PH<br>Essentials of PH Practice & Leadership 1: Leading Self & Teams in PH | Tues 6:10 – 9:00 pm or Wed 3:10 – 6:00 pm<br>Tues 3:10-6:00 pm<br>Thurs 6:10-7:00 pm |
| Spring 1 <sup>st</sup> year<br>5 credits | 3<br>2      | PUBH 6002<br>PUBH 6007              | Biostatistical Applications for Public Health<br>Social & Behavioral Approaches to Public Health   | TBD<br>TBD   |
| Summer 1 <sup>st</sup> year<br>3 credits | 2<br>1      | PUBH 6012<br>PUBH 6022*             | Fundamentals of Health Policy<br>Essentials of Public Health Leadership & Practice 2: Managing Organizations & Influencing Systems in PH                         | TBD<br>TBD   |
| Fall 2 <sup>nd</sup> year<br>7 credits   | 3<br>2<br>2 | PUBH 6126<br>PUBH 6009<br>Electives | Assessment and Control of Environmental Hazards<br>Fundamentals of Program Evaluation<br>Electives   | Mon 5:10 – 8:00 pm<br>TBD  |
| Spring 2 <sup>nd</sup> year<br>8 Credits | 3<br>3<br>2 | PUBH 6123<br>PUBH 6131<br>Electives | Toxicology: Applications for Public Health Policy<br>Quantitative Methods in Environmental and Occupational Health<br>Electives                                  | Mon 3:10 – 6:00 pm<br>Thurs 3:10 – 6:00 pm, Lab Thurs 6:30-8:30pm                    |
| Summer 2nd year<br>2 Credits             | 2           | Electives                           | Electives  |  |
| Fall 3 <sup>rd</sup> Year<br>6 Credits   | 3<br>1<br>2 | PUBH 6121<br>PUBH 6137<br>Electives | Environmental & Occupational Epidemiology<br>EOH Culminating Experience Course Part 1<br>Electives   | Wed 5:10 – 8:00 pm<br>Wed 3:10 – 5:00 pm   |
| Spring 3 <sup>rd</sup> Year<br>7 Credits | 3<br>3<br>1 | PUBH 6122<br>PUBH 6124<br>PUBH 6138 | Policies, Politics and Programs<br>Risk Management and Communication<br>EOH Culminating Experience Course Part 2   | Thurs 6:10 – 9:00 pm<br>Wed 5:10 – 8:00 pm<br>Wed 3:10 – 5:00 pm                     |
| <b>Total</b>                             | <b>45</b>   |                                     |  |  |

PUBH 6023- Interprofessional Education Experience (0) – students can register anytime following completion of work in PUBH 6022.

PUBH 6000- Typically, students complete the 120 hours of the practicum during the summer months.

A total of 8 credits of electives from graduate courses are required, preferably during last three semesters. Students are recommended to take at least 4 credits from EOH focused courses. EOH Electives include:

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- PUBH 6128 Global Environmental and Occupational Health 2 Online Spring I and Summer
- PUBH 6130 Sustainable Energy and the Environment 2 Fall, Tues 6:10 - 8:00 pm
- PUBH 6133 Social Dimensions of Climate Change & Health 3 Online Spring I and Summer
- PUBH 6135 Researching Climate Change and Public Health 3 Online Fall and Spring II
- PUBH 6140 Global Climate Change & Air Pollution 2 Summer Thursday 3:45 - 6:00 pm
- PUBH 6146 Microbiomes & Microbial Ecology in Public Health 2 Fall Tuesday 4:10 - 6:00 pm
- PUBH 6199 TOPICS: EOH Data & Modelling 2 Fall Wed 6:10 – 8:00 pm
- PUBH 6199 TOPICS: Veterans Deployment and Environmental Issues 1 Summer
- PUBH 6199 Any 6199 TOPICS course