

PUBLIC HEALTH, MPH: ENVIRONMENTAL HEALTH SCIENCES

Environmental Health Sciences MPH students learn the biological, chemical, and structural components of public health and how to put current research into practice. Students' experiences incorporate environmental health theories with cross-cutting public health competencies such as communication, public health biology, systems-thinking and leadership.

Faculty for this program are drawn from a number of departments and research units at UWM, affording the student an unparalleled opportunity for cross-disciplinary training and the performance of novel research projects. Laboratories and equipment are available across campus to promote innovative concepts in issues of Environmental Health Sciences.

Related Certificate

- Interprofessional Graduate Certificate in Public and Population Health (<https://catalog.uwm.edu/public-health/public-population-health-graduate-certificate/>)
- Graduate Certificate in Maternal and Child Health (<https://catalog.uwm.edu/public-health/maternal-child-health-graduate-certificate/>)

The Zilber College of Public Health (CPH) offers a Master of Public Health (MPH) with concentration in six tracks of study, a PhD in Public Health with a Concentration in Community and Behavioral Health Promotion, a PhD in Public Health with a Concentration in Biostatistics, a PhD in Environmental Health Sciences, and a PhD in Epidemiology.

Master of Public Health

The Master of Public Health (MPH) offered by the Zilber CPH is a professional master's degree program that provides students with a broad understanding of public health practice. Students in the MPH program can specialize in six distinct tracks of study: 1) Biostatistics, 2) Community and Behavioral Health Promotion, 3) Environmental Health Sciences, 4) Epidemiology, 5) Public Health Policy, and 6) Nutrition and Dietetics. The College also offers a coordinated MPH/MSW degree in collaboration with the Helen Bader School of Social Welfare.

Like most MPH programs, the Zilber CPH's program imparts knowledge and skills in each of these core disciplines in public health, helping prepare all students to analyze information and consider solutions to public health problems using a social justice lens at the community, institutional, and societal levels. Courses have been designed to teach program- and track-level competencies as defined by Zilber CPH faculty. Program-level competencies reflect key public health skills including systems thinking, ethics, analytical methods, communications/informatics, diversity/culture, leadership, and professionalism. In addition, students engage in a specific track of study, gaining deeper competency in one of the six areas. Upon graduation students are prepared for positions in a range of public/population health and healthcare settings and/or for doctoral-level study.

Admission Requirements

Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

Admission

An applicant must meet Graduate School requirements as well as the desired track of study requirements. The following steps must be met to be considered for admission to the MPH Program. These materials will be considered in a holistic admissions process with special attention to ensure a diverse student body.

1. Three letters of recommendation from persons familiar with the applicant's academic experience and potential for graduate work in public health.
2. CV or Resume.
3. Address the following two short essay questions, limiting responses to no more than 500 words (approximately 250 words per question):
 - Describe how your professional, volunteer, and educational background has led you to seek a degree in public health.
 - How will your desired track of study help you reach your personal and professional goals in public health?
4. International applicants must also meet admission standards set and monitored by UWM's Center for International Education.
5. MPH applicants must use SOPHAS (<https://sophas.org/>) to apply. Applicants must select the track to which they are applying: Biostatistics, Community and Behavioral Health Promotion, Environmental Health Sciences, Epidemiology, Public Health Policy, or Nutrition and Dietetics.

Credits and Courses

All students enrolled in the MPH program take a common set of core classes designed to give basic skills and knowledge of public health concepts. The core curriculum consists of at least 24-25 credit hours, including four credits for the Field Experience (3 credits) and Leadership in Public Health (1 credit) courses and a two-credit capstone seminar. In addition to the common core, students complete the required coursework in one of six specialization tracks (total program credits in parentheses): Biostatistics (46 credits), Community and Behavioral Health Promotion (48-49 credits), Environmental Health Sciences (45 credits), Epidemiology (49 credits), Public Health Policy (48 credits), or Nutrition and Dietetics (64 credits). Students must maintain a cumulative GPA of 3.0 or better in order to progress through the program.

MPH Required Common Core Courses (24-25 credits)

Code	Title	Credits
PH 702	Introduction to Biostatistics	3
PH 703	Environmental Health Sciences	3
PH 704	Principles and Methods of Epidemiology	3
PH 705	Principles of Public Health Policy and Administration	3
PH 706	Perspectives on Community & Behavioral Health	3

PH 708	Health Systems and Population Health	3
PH 733	Overview of Qualitative Methods for Public Health ¹	1
PH 790	Field Experience in Public Health (See following section for details) ²	3
PH 791	Leadership in Public Health	1
PH 800	Capstone in Public Health (See following section for details) ³	2
Total Credits		25

¹ Required for students in the Biostatistics, Environmental Health Science, Epidemiology, and Nutrition and Dietetics Tracks. Community and Behavioral Health Promotion Track students who take a qualitative methods course and Public Health Policy Track students would be exempt.

² Satisfactory/Unsatisfactory; may be taken for 1, 2, or 3 credits in a given semester. A total of 3 credits is required.

³ Satisfactory/Unsatisfactory; completed in the final semester of study.

Field Experience

The Field Experience enables students to apply knowledge and skills learned in the classroom to public health problems in a community context. Students work with their Faculty Advisor and college staff to identify a placement that matches their public health interests and career goals. Possible placement settings include a local health department, state health department, non-profit agency, hospital system, or research institute. Students in the Nutrition and Dietetics track will be provided with specific placement(s) by the program. The experience is a mentored placement engaging both a faculty advisor and a site preceptor. Students complete at least two products as agreed upon with the site preceptor. This course is offered in the summer, fall, and spring semesters.

Students complete three credits (80 contact hours per one credit, 240 hours total) with the organization. The specified competencies, scope of work, and final products for the organization are defined in a learning agreement, which is signed by the student, preceptor, faculty advisor and course instructor. Students must demonstrate attainment of at least five competencies, three of which must be Council on Education for Public Health (CEPH) MPH Foundational Competencies (see Field Experience Handbook), and two of which are identified from the track competency sets.

The following two CEPH MPH Foundational Competencies are required of all students:

#16. Apply leadership and/or management principles to address a relevant issue (may include creating a vision, empowering others, fostering collaboration, and guiding decision making).

#19. Communicate audience-appropriate (i.e., non-academic, non-peer audience) public health content, both in writing and through oral presentation.

Students choose their third Foundational Competency.

Students enrolled in the Nutritional and Dietetics track will be required to demonstrate attainment of select competencies from the Accreditation Council for Education in Nutrition and Dietetics (ACEND) during Field Experience in Public Health. Nutrition and Dietetics students will be required to meet the 3-credit requirement for Field Experience in Public Health in one semester and complete additional field experience program

requirements in food systems management and medical nutrition therapy.

In addition, students take the one-credit Leadership Public Health course. This course is designed to give students the opportunity to apply three specific CEPH MPH Foundational Competencies related to the Field Experience. The Field Experience setting provides students with opportunities to integrate these competencies through their projects, observe professionals in their organizations and the community, and learn important skills in these three areas. The required competencies are:

#16. Apply leadership and/or management principles to address a relevant issue (may include creating a vision, empowering others, fostering collaboration, and guiding decision making).

#17. Apply negotiation and mediation skills to address organizational or community challenges (among parties with conflicting interests and/or different desired outcomes).

#21. Integrate perspectives from other sectors and/or professions to promote and advance population health (direct engagement between student[s] and individual[s] in a sector or profession other than public health to complete a task or solve a problem).

Students fulfill these competencies with readings and through a series of activities including case studies or scenarios/role playing exercises. Assessments for the leadership, negotiation and interprofessional team competencies include participation in the sessions and written papers. The Leadership in Public Health course is offered in the summer and fall semesters. All four Field Experience and Leadership course credits may be taken in one semester or spread out over two semesters.

Capstone

The capstone requires students to integrate the knowledge and skills learned in the classroom, Field Experience, and/or lab into some aspect of professional public health practice. The capstone project is an opportunity for students to synthesize and demonstrate public health competencies. Capstone projects can vary by track and usually include analysis of information and data. The projects also include a comprehensive literature review as required by track.

Students work with their Faculty Advisor to write a project proposal the semester prior to the capstone reflecting the student's interests and career goals. Students then implement the project during their final semester of the program. The project has both written paper and oral presentation components. In addition, students attend several weekly seminars.

Environmental Health Sciences Concentration

Code	Title	Credits
Required Courses		
PH 743	Environmental Risk Assessment	3
PH 750	Seminar in Environmental Health Sciences:	2
PH 762	Environmental Epidemiology	3
Electives (see table below)		12
Total Credits		20

Electives

Code	Title	Credits
Built Environment "S" Elective		3
Select one of the following courses:		
ARCH 801	Special Topics:	1-3
GEOG 520	Physical Geography of the City	3
GEOG 945	The Internal Structure of the City	3
IND ENG 580	Ergonomics	3
URBPLAN 791	Introduction to Urban Geographic Information Systems for Planning	3
Other courses as approved by advisor.		
Chemical Environment "S" Elective		3
Select one of the following courses:		
PH 741	Environmental Public Health Microbiology	3
PH 745	Developmental Toxicology	3
Other courses as approved by advisor.		
Biological Environment "S" Elective		3
Select one of the following courses:		
PH 741	Environmental Public Health Microbiology	3
PH 745	Developmental Toxicology	3
Other courses as approved by advisor.		
Elective		3
Select one additional course from the Built, Chemical, or Biological "S" electives or other course as approved by advisor.		

Additional Requirements**Faculty Advisor**

Each student will be assigned a track-specific Faculty Advisor during Orientation week preceding the first semester. Faculty Advisors assist the student in the development of an individual Plan of Study designed to advance the career goals of the student and be consistent with the track curriculum. The Advisor plays an important role in connecting the Field Experience, Capstone, and career goals for each student. If deemed necessary, any student can petition to the Zilber Office of Academic and Student Affairs for a reassignment of Faculty Advisor. Program track faculty will make every effort to accommodate requests to give all students opportunities for success in the MPH Program.

Thesis

Not required. See capstone for similar culminating experience.

Comprehensive Examination

Not required. See capstone for similar culminating experience.

Time Limit

The student must complete all degree requirements within seven years of initial enrollment.

Public Health MPH: Environmental Health Sciences Learning Outcomes

Master of Public Health students in the Environmental Health Sciences Track can expect to:

1. Describe genetic, physiological and overall human health effects of primary environmental hazards resulting from both chronic and acute exposures.
2. Describe approaches for assessing, preventing and controlling environmental hazards that pose risks to both human and ecological health.
3. Perform a risk assessment of an environmental health agent.
4. Identify, locate and use appropriate reference materials.
5. Comprehend the primary scientific research literature and obtain information directly from experts in the field of environmental health sciences.

Public Health MPH Learning Outcomes

All graduate students in UWM's Zilber School of Public Health can expect to:

1. Explain the foundational principles and historical perspectives that shape the field of public health.
2. Describe how multiple determinants, including socioeconomic, biological, behavioral, and environmental, and the interrelations among these determinants shape population health and health inequities.
3. Integrate principles of social and environmental justice within public health practice and research.
4. Employ ethical principles and protocols in public health practice and research.
5. Implement approaches to public health practice and research that recognize the social, cultural and environmental circumstances of individuals, communities and populations.
6. Utilize appropriate quantitative and/or qualitative methods in public health practice and research.
7. Apply interdisciplinary theories, research methods and best practices to address public health issues and promote population health.
8. Collect, synthesize and critically analyze information and data to identify and address public health issues and inform interventions.
9. Practice professionalism; demonstrated by integrity, respect, transparency, sound judgment, and constructive interactions with colleagues, community members, stakeholders and the public at large.
10. Demonstrate leadership and partnership skills that foster and support collaborations across diverse communities, settings and sectors.
11. Communicate effectively about public health issues with diverse audiences using a variety of strategies and modalities.
12. Advocate for the public's health and health equity.

Accelerated Program Option

This program is offered as part of an accelerated graduate program. For more information, see Accelerated Graduate Degrees (<https://catalog.uwm.edu/opportunities-resources/accelerated-graduate-degrees/>).