

# Public Health, M.P.H.

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## Degrees Offered

- Master of Public Health (MPH)

## Nature of the Program

The WVU Master of Public Health (MPH) degree is a multidisciplinary professional degree focused on the application of science, research and theoretical knowledge toward the prevention of disease and improving health and well-being. MPH graduates possess a broad array of skills needed to address challenges affecting communities, including engaging and working with diverse people across sectors, educating the public about best practices in health, and advocating for policy- and systems-level changes that impacts entire populations. The MPH program teaches students to develop and implement evidence-based solutions to complex health issues. Graduates leave our program prepared to work in a variety of public health settings such as health departments, clinics, and federal agencies.

## Areas of Emphasis

### APPLIED EPIDEMIOLOGY AND BIostatISTICS

The MPH degree with an emphasis in Applied Epidemiology & Biostatistics is designed for those who wish to acquire knowledge and skills necessary for epidemiologic and biostatistical practice and research. The purpose of the degree program is to:

- Introduce core principles and concepts of epidemiology and biostatistics,
- Develop proficiency in standard data management and biostatistical analysis
- Apply epidemiologic and biostatistical concepts to address practical public health concerns

This degree is focused on workforce development and training the next generation of public health professionals. The WVU MPH program is most appropriate for students interested in applied epidemiology and biostatistics. After graduating students will be able to assist in developing epidemiologic studies and apply biostatistical analyses to a range of health scenarios. A diverse faculty create opportunities for students to gain knowledge and experience applying coursework to study injury, substance misuse, infectious diseases, chronic diseases, and more. The culmination of these abilities make our WVU MPH graduates competitive for fellowships, PhD programs, or employment within industry, hospitals, academic institutions, or global, federal, state, or local agencies. Examples of jobs include hospital infection control, public health department epidemiologist, CDC Fellowships, and data analyst at pharmaceutical or insurance agencies.

Where applicable, the program builds on the existing Applied Biostatistics Certificate and community partnership, like CDC NIOSH or the WV Clinical and Translational Sciences Institute which are located on campus. These experiences provide additional opportunities for students enhance their comprehensive core skillsets with more advanced applications in epidemiology and biostatistics.

### APPLIED EPIDEMIOLOGY & BIostatISTICS MAJOR COMPETENCIES

In addition to the standard MPH Foundational Competencies required of all MPH students, our major in Applied Epidemiology & Biostatistics also prepares students to meet six competencies specific to the major. These include:

1. Manage data structures efficiently using standard statistical software.
2. Analyze public health problems through epidemiological and biostatistical lenses.
3. Apply basic multivariable statistical techniques commonly used in clinical and public health settings.
4. Derive appropriate inferences from epidemiological and biostatistical data.
5. Develop written and oral presentations based on sound statistical analyses and epidemiological principles for both substantive investigators and members of the community.

### PUBLIC HEALTH PRACTICE AND LEADERSHIP

The MPH degree with an emphasis in Public Health Practice and Leadership (PHPL) is focused on examining social and political systems that influence the health status of populations and then learning how to influence and/or design, implement, and manage broad, system-level instruments to improve population health outcomes. These instruments might include programs in public health agencies, not-for-profit organizations, or healthcare provider settings, or policies at the local, state, national, or international governmental levels.

The MPH emphasis in PHPL has a dual emphasis on acquiring both theoretical knowledge and practical skills. Thus, this degree is ideal for recent graduates or early- and mid-career public health professionals seeking to develop or advance their careers in a variety of health care settings. Additionally, the professional practice component of the program has been designed to place students in public health settings and apply their newly acquired knowledge and skills to address real-world problems.

Upon completion of the MPH degree with an emphasis in PHPL, students will be prepared to continue developing their careers as leaders, managers, public health professionals, policy analysts, program evaluators, advocates, or health program managers in a variety of public health, government, health care, or other professional settings. In addition, our students will be prepared to continue their graduate education at the doctoral level.

## **PUBLIC HEALTH PRACTICE AND LEADERSHIP AREA OF EMPHASIS COMPETENCIES**

In addition to the standard MPH Foundational Competencies required of all MPH students, our emphasis in Public Health Practice and Leadership also prepares students to meet 5 competencies specific to the emphasis. These include:

1. Develop skills to influence the effective production and implementation of health policy.
2. Assess structures and processes for effective health services management.
3. Employ processes and applications that positively effect both individuals and group goals.
4. Develop analytic and statistical skills for application to health service issues.
5. Appraise theory and skills in policy, management, and leadership to examine and influence real world health issues.

## **SOCIAL AND BEHAVIORAL SCIENCES**

The MPH degree with an emphasis in Social and Behavioral Sciences (SBHS) addresses the behavioral, social, and environmental factors related to individual and population health and health disparities over the life span. Research and practice in this track contributes to the development, administration, and evaluation of programs and policies in public health to promote and sustain healthy environments and lives for individuals and populations.

A student who graduates with an MPH degree with an emphasis in Social and Behavioral Science from WVU will be qualified to work and provide leadership in public health and research settings at national, state or local levels, or work in the public or private sector on health promotion program implementation and evaluation efforts.

## **SOCIAL AND BEHAVIORAL SCIENCES AREA OF EMPHASIS COMPETENCIES**

In addition to the standard MPH Foundational Competencies required of all MPH students, our emphasis in Social and Behavioral Sciences also prepares students to meet competencies specific to the major. These include:

1. Demonstrate community engagement principles when addressing public health problems.
2. Appraise qualitative data used for evaluating factors associated with improving public health.
3. Appraise quantitative data used for evaluating factors associated with improving public health.
4. Implement social behavioral theories & frameworks designed to describe public health problems and improve public health interventions.
5. Recommend interventions likely to improve public health.
6. Organize interventions, including the assessment, planning, implementation, and evaluation of public health interventions.
7. Synthesize social and behavioral sciences principles to design an evaluation plan of a public health program.

## **Admissions**

Baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.0

International graduate students must meet WVU's minimum score requirement for English language proficiency (<https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2023-2024/international-graduate-applicant/>).

## **APPLICATION PROCESS**

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), <http://www.sophas.org/>. The MPH Admissions process has two steps. (1) All MPH applications must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, <https://graduateadmissions.wvu.edu/>.

In addition to the application, applicants must submit to SOPHAS a statement of purpose and objectives, three letters of reference, a current resume/ curriculum vitae, and all university transcripts. SOPHAS requires original transcripts from ALL U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee. Applicants must indicate their first choice of MPH major and may also indicate a second choice. A maximum of two choices is allowed.

E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.

Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.

SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

International Students must meet WVU's minimum score requirement for English Language Proficiency (<https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2023-2024/international-graduate-applicant/>).

Major Code: 8402

## Major Requirements

Code	Title	Hours
A minimum GPA of 3.0 is required.		
Students must earn a minimum grade of "C-" in all PUBH and emphasis coursework.		
PUBH 510	Contemporary Foundations of Public Health Practice	2
PUBH 511	Epidemiology for Public Health Practice	3
PUBH 512	Research Translation and Evaluation in Public Health Practice	3
PUBH 613	Public Health Program Evaluation	3
PUBH 520	Building and Sustaining Public Health Capacity	2
PUBH 521	Public Health Prevention and Intervention	3
PUBH 629	MPH Capstone	1
PUBH 630	MPH Field Practicum	3
PUBH 540	Health Systems Leadership	3
PUBH 541	Systems Thinking in Public Health Practice	2
PUBH 696	Graduate Seminar	1
General Elective		3
Approved Elective Courses available from MPH Director and/or MPH Advisor		
<b>Required Area of Emphasis</b>		<b>15</b>
Applied Epidemiology and Biostatistics		
Public Health Practice and Leadership		
Social and Behavioral Sciences		
Total Hours		44

- All students in the WVU SPH MPH program are required to maintain a portfolio that demonstrates their ability to meet the competencies associated with the MPH Foundational Courses, the Area of Emphasis Courses, and to apply a selection of those competencies in an approved practice-based setting(s). This portfolio must be submitted for review at the end of each academic year, as well as reviewed and approved prior to the successful completion of the program.
- The MPH degree will be awarded based on successful completion of all academic requirements and demonstrated achievement of competencies via the student portfolio system and class-based evaluations of competency attainment.

## Suggested Plan of Study

### First Year

Fall	Hours	Spring	Hours	Summer	Hours
PUBH 510		2 PUBH 511		3 PUBH 630	3
PUBH 512		3 PUBH 520		2	
PUBH 521		3 PUBH 540		3	
PUBH 541		2 PUBH 696		1	
		General Elective		3	
		10			3
					12

### Second Year

Fall	Hours	Spring	Hours
AOE Courses		6 PUBH 613	3
AOE Elective		3 PUBH 629	1

AOE Courses	6
9	10

Total credit hours: 44

Note: With approval from the MPH Program Director and the Director of Practice-Based Learning, PUBH 630: MPH Field Practicum can be taken anytime during Year 2. Students must select at least six credit hours for electives.

## Areas of Emphasis

- Applied Epidemiology and Biostatistics (p. 4)
- Public Health Practice and Leadership (p. 4)
- Social and Behavioral Sciences (p. 4)

## Applied Epidemiology and Biostatistics Area of Emphasis

Code	Title	Hours
BIOS 603	Applied Biostatistics 2	3
BIOS 611	Data Management and Reporting	3
EPID 611	Concepts and Methods of Epidemiology	3
EPID 612	Applied Epidemiology for Public Health	3
Elective		3
Approved elective courses available from MPH Director and/or MPH Advisor		
Total Hours		15

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Those seeking this emphasis must take BIOS 601 as a substitute for PUBH 612.

## Public Health Practice and Leadership Area of Emphasis

Code	Title	Hours
<b>Policy</b>		<b>3</b>
Select one of the following:		
HPML 510	Health Economics	
HPML 601	Foundations of Health Policy	
<b>Management and Leadership</b>		<b>3</b>
Select one of the following:		
HPML 520	Health Administration and Operations Management	
HPML 555	Health Services Project Management	
HPML 582	Managing Quality Improvement in Healthcare	
<b>Managerial Analysis and Decision-Making</b>		<b>3</b>
Select one of the following:		
HPML 556	Managerial Epidemiology & Strategy	
HPML 622	Analytic Methods for Health Policy, Management, and Leadership	
<b>Electives</b>		<b>6</b>
Approved elective courses available from MPH Director and/or MPH Advisor		
Total Hours		15

## Social and Behavioral Science Area of Emphasis

Code	Title	Hours
SBHS 611	Community Assessment	3
SBHS 617	Community Engagement and Advocacy in Public Health	2
SBHS 619	Intervention Planning & Design	3
SBHS 620	Implementing and Managing Public Health Programs	3
SBHS 621	Grant Writing for Public Health Practice	1

Elective	3
Approved elective courses available from MPH Director and/or MPH Advisor	
Total Hours	15

## Accelerated Program

In order to be admitted to this ABM program, applicants must:

- be enrolled in the Bachelor of Science in Public Health (BSPH) program.
- have a minimum GPA of 3.5.
- complete a minimum of 60 credit-hours, but not more than 92 credit-hours, as prescribed in the BSPH Plan of Study.
- Transfer students (internal or external) are not eligible for the ABM program at this time.
- earn a minimum grade of "B+" in PUBH 205: Writing for Public Health Audiences.
- schedule one meeting with their WVU School of Public Health undergraduate advisor to ensure they are eligible to apply for the program.
- not be enrolled in a dual degree or certificate program.
- not have any documented infractions with the WVU Office of Student Conduct or any external law enforcement agencies.

## Degree Requirements

Code	Title	Hours
A cumulative GPA of 2.5 is required for the Bachelor of Science in Public Health.		
University Requirements		51
School Core Requirements		25
Public Health Major Requirements		25
MPH Public Health Program Requirements		44
Total Hours		145

## University Requirements

Code	Title	Hours
General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)		
Outstanding GEF Requirements 1, 2, 3, 4, 5, 6 and 7		25
PUBH 191	First-Year Seminar	1
General Electives		25
Total Hours		51

## School Core Requirements

Code	Title	Hours
PUBH 101	Introduction to Public and Community Health	3
PUBH 200	Introduction to Public Health Careers and Information	1
PUBH 201	Global Perspectives of Public Health	3
PUBH 202	Social Determinants of Health	3
PUBH 205	Writing for Public Health Audiences	3
PUBH 211	Biostatistics for Population Health	3
PUBH 222	Epidemiology for Public Health	3
PUBH 233	The US Healthcare System: Structures and Incentives	3
PUBH 241	Biological Basis of Public Health	3
Total Hours		25

## Public Health Major Requirements

Code	Title	Hours
A minimum GPA of 2.5 is required in all Public Health Major Requirements.		
<b>Discipline-Specific Requirements</b>		
PUBH 243	Issues in Environmental Health	3
PUBH 331	Introduction to Health Policy	3

PUBH 352	Introduction to Social and Behavioral Science and Practice	3
PUBH 353	Mastering Health and Wellness	3
Select one of the following:		3
PUBH 311	Health Research Data Management and Reporting	
PUBH 423	Introduction to Modern Epidemiologic Research	
PUBH 454	Introduction to Public Health Research Methods	
<b>Public Health Electives</b>		<b>3</b>
All remaining PUBH Courses (excluding PUBH 486) *		
<b>Culminating Experience Coursework</b>		
PUBH 400	Field Placement Preparation Seminar	1
PUBH 489	School of Public Health Undergraduate Capstone (minimum grade of C-)	2
PUBH 481	Public Health Field Experience	4
Total Hours		25

## MPH Program Requirements

Code	Title	Hours
A minimum GPA of 3.0 is required.		
Students must earn a minimum grade of "C-" in all PUBH and emphasis coursework.		
PUBH 510	Contemporary Foundations of Public Health Practice	2
PUBH 511	Epidemiology for Public Health Practice	3
PUBH 512	Research Translation and Evaluation in Public Health Practice	3
PUBH 613	Public Health Program Evaluation	3
PUBH 520	Building and Sustaining Public Health Capacity	2
PUBH 521	Public Health Prevention and Intervention	3
PUBH 629	MPH Capstone	1
PUBH 630	MPH Field Practicum	3
PUBH 540	Health Systems Leadership	3
PUBH 541	Systems Thinking in Public Health Practice	2
PUBH 596	Graduate Seminar	1
<b>General Elective</b>		<b>3</b>
Approved Elective Courses available from MPH Director and/or MPH Advisor		
<b>Required Area of Emphasis</b>		<b>15</b>
Applied Epidemiology and Biostatistics		
Public Health Practice and Leadership		
Social and Behavioral Sciences		
Total Hours		44

## Suggested Plan of Study

### First Year

Fall	Hours	Spring	Hours
PUBH 191		1 ENGL 102 (GEF 1)	3
PUBH 101		3 BIOL 101 & 101L (GEF 2)	4
ENGL 101 (GEF 1)		3 PUBH 201	3
GEF 4		3 PUBH 202	3
GEF 5		3 GEF 7	3
GEF 6		3	
		16	16

### Second Year

Fall	Hours	Spring	Hours
PUBH 241		3 PUBH 211	3
PUBH 205		3 PUBH 233	3

PUBH 200		1 PUBH 331		3	
PUBH 243		3 PUBH 353		3	
GEF 3		3 General Elective		3	
General Elective		3			
		16		15	
<b>Third Year</b>					
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>		
PUBH 222		3 PUBH 481		4	
PUBH 352		3 PUBH 489		2	
PUBH 400		1 PUBH 311 or 454		3	
PUBH Elective		3 General Electives		6	
General Electives		6			
		16		15	
<b>Fourth Year</b>					
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>	<b>Summer</b>	<b>Hours</b>
PUBH 510		2 PUBH 511		3 PUBH 630	3
PUBH 512		3 PUBH 540		3	
PUBH 521		3 PUBH 595		1	
PUBH 541		2 PUBH 520		2	
General Elective		3 General Elective		4	
		13		13	3
<b>Fifth Year</b>					
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>		
AOE Course		3 PUBH 629		1	
AOE Course		3 PUBH 613		3	
AOE Course		3 AOE Course		3	
General Elective		3 AOE Course		3	
		12		10	

Total credit hours: 145

## Major Learning Outcomes

### PUBLIC HEALTH

Foundational Public Health Knowledge and MPH Foundational Competencies (Learning Outcomes) are determined by the School's accrediting body, the Council on Education for Public Health (CEPH). Competencies for Areas of Emphasis (which CEPH refers to as concentrations) are set by the program faculty and leadership.

#### MPH Foundational Public Health Knowledge

There are 12 elements of Foundational Public Health Knowledge in the MPH program:

1. Explain public health history, philosophy and values
2. Identify the core functions of public health and the 10 Essential Services\*
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
6. Explain the critical importance of evidence in advancing public health knowledge
7. Explain effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect a population's health
9. Explain behavioral and psychological factors that affect a population's health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health)

### **MPH Foundational Competencies (Learning Outcomes)**

The 22 MPH Foundational Competencies are organized into eight (8) domains:

#### *Evidence-Based Approaches to Public Health*

1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice

#### *Public Health & Health Care Systems*

1. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
2. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

#### *Planning & Management to Promote Health*

1. Assess population needs, assets and capacities that affect communities' health
2. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
3. Design a population-based policy, program, project or intervention
4. Explain basic principles and tools of budget and resource management
5. Select methods to evaluate public health programs

#### *Policy in Public Health*

1. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
2. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
3. Advocate for political, social or economic policies and programs that will improve health in diverse populations
4. Evaluate policies for their impact on public health and health equity

#### *Leadership*

1. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
2. Apply negotiation and mediation skills to address organizational or community challenges

#### *Communication*

1. Select communication strategies for different audiences and sectors
2. Communicate audience-appropriate public health content, both in writing and through oral presentation
3. Describe the importance of cultural competence in communicating public health content

#### *Interprofessional Practice*

1. Perform effectively on interprofessional teams

#### *Systems Thinking*

1. Apply systems thinking tools to a public health issue

### **Area of Emphasis Competencies (Learning Outcomes):**

#### *Applied Epidemiology & Biostatistics emphasis*

1. Manage data structures efficiently using standard statistical software.
2. Analyze public health problems through epidemiological and biostatistical lenses.
3. Apply basic multivariable statistical techniques commonly used in clinical and public health settings.
4. Derive appropriate inferences from epidemiological and biostatistical data.
5. Develop written and oral presentations based on sound statistical analyses and epidemiological principles for both substantive investigators and members of the community.



Public Health Practice & Leadership emphasis

1. Develop skills to influence the effective production and implementation of health policy.
2. Assess structures and processes for effective health services management.
3. Employ processes and applications that positively effect both individuals and group goals.
4. Develop analytic, statistical, and economic skills for application to health service issues.
5. Appraise theory and skills in policy, management, and leadership to examine and influence real world health issues.

Social & Behavioral Sciences emphasis

1. Demonstrate community engagement principles when addressing public health problems.
2. Appraise qualitative data used for evaluating factors associated with improving public health.
3. Appraise quantitative data used for evaluating factors associated with improving public health.
4. Implement social behavioral theories & frameworks designed to describe public health problems and improve public health interventions.
5. Recommend interventions likely to improve public health.
6. Organize interventions, including the assessment, planning, implementation, and evaluation of public health interventions.
7. Synthesize social and behavioral sciences principles to design an evaluation plan of a public health program.