

Milken Institute School of Public Health

THE GEORGE WASHINGTON UNIVERSITY

Department of Epidemiology & Biostatistics

Master of Public Health

Epidemiology

2017-2018

Note: All curriculum revisions will be updated immediately on the website
<http://www.publichealth.gwu.edu>

Program Co-Directors

Manya Magnus, Ph.D., M.P.H.

Associate Professor

Dept. of Epidemiology and Biostatistics

950 New Hampshire Ave NW, 5th Floor

Washington, DC 20052

Tel: 202-994-3024

Email: manyadm@gwu.edu

Heather Young, Ph.D., M.P.H.

Professor

Dept. of Epidemiology and Biostatistics

950 New Hampshire Ave NW, 5th Floor

Washington, DC 20052

Tel: 202-994-6518

Email: youngh@gwu.edu

Mission/Goals

The mission of the MPH Epidemiology Program is to educate graduate students by developing the necessary methodological and quantitative skills to work successfully in the field. While nurturing students' capacity to think critically and creatively, we strive to deepen their commitment to improving the public's health and to engaging in and promoting public service qualities we believe are essential for future epidemiologists and public health practitioners.

Goals

The goals of the Epidemiology Program are to ensure that graduates:

- Understand and adhere to high scientific standards for research;
- Understand and follow guidelines for ethical treatment of research participants;
- Can communicate research findings to a lay audience; and
- Respect cultural diversity throughout all of the above.

MPH Foundational Competencies

1. Apply epidemiological methods to the breadth of settings and situations in public health practice.	12. Discuss multiple dimensions of the policy making process, including the roles of ethics and evidence.
2. Select quantitative and qualitative data collection methods appropriate for a given public health context.	13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.	14. Advocate for political, social or economic policies and programs that will improve health in diverse populations.
4. Interpret results of data analysis for public health research, policy or practice.	15. Evaluate policies for their impact on public health and health equity.
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings.	16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.
6. 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.	17. Apply negotiation and mediation skills to address organizational or community challenges.
7. Assess population needs, assets, and capacities that affect community's health.	18. Select communication strategies for different audiences and sectors.

8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.	19. Communicate audience-appropriate public health content, both in writing and through oral presentation.
9. Design a population-based policy, program, project or intervention.	20. Describe the importance of cultural competence in communicating public health content.
10. Explain basic principles and tools of budget and resource management.	21. Perform effectively on inter-professional teams.
11. Select methods to evaluate public health programs.	22. Apply systems thinking tools to a public health issue.

Program-Specific Competencies (*minimum 5 distinct program competencies, not shared with any other program. Any that exceed 5 competencies may be shared with other programs.*)

Upon Completion of the MPH Program in *Epidemiology* students should possess the following program competencies:

- Apply epidemiological and biomedical concepts in identifying and describing the determinants and the distribution of disease in human populations. Relevant courses: PUBH 6247, 6252, 6014, 6015
- Identify and assess patterns of emerging diseases to postulate hypotheses and to identify appropriate strategies in order to evaluate the impact of health problems. Relevant courses: PUBH 6014, 6015, 6247, 6252
- Enumerate and apply underlying principles and methods to conduct epidemiologic studies including observational and experimental designs, screening programs, public health surveillance, and other epidemiologic designs. Relevant courses: PUBH 6247, 6252, 6014, 6015
- **Plan and design epidemiologic studies including observational and experimental designs.** Relevant courses: PUBH 6247, 6252, 6014, 6015.
- **Evaluate epidemiologic studies and identify limitations and sources of bias.** Relevant courses: PUBH 6247, 6252, 6014, 6015
- Identify the appropriate data analysis methods, conduct data analysis using computerized software program, and interpret the results from epidemiological studies. Relevant courses: PUBH 6249, 6252, 6260, 6014, 6015
- Demonstrate proficiency in constructing and managing databases from epidemiological studies using statistical software, e.g. The SAS® System. Relevant courses: PUBH 6249, 6260, 6014, 6015
- Synthesize data and relevant literature to interpret findings in a causal framework, write manuscripts, and make oral presentations. Relevant courses: PUBH 6247, 6249, 6252, 6260, 6014, 6015
- Work in a multidisciplinary research team and recognize and appropriately respond to ethical and legal issues that arise in research. Relevant courses: PUBH 6247, 6249, 6252, 6260, 6014, 6015
- Define and critically assess issues in at least two of the following specialty areas in epidemiology:
 - Clinical epidemiology such as decision analysis, cost-effectiveness to clinical and public health problems.
 - Major topics in infectious disease epidemiology
 - Methods and issues of cancer epidemiology
 - Methods and issues of aging or chronic disease
 - Methods and issues of surveillance systems in public health.
Relevant courses: PUBH 6247, 6252, and selection of 6237, 6241, 6242, 6244, 6245, 6248, 6014, 6015

Course Descriptions and Registration information can be found on the website:

<http://publichealth.gwu.edu/academics/>.

Milken Institute School of Public Health <small>THE GEORGE WASHINGTON UNIVERSITY</small>		Department of Epidemiology & Biostatistics Master of Public Health Epidemiology Program-at-a-Glance 2017-2018	
<i>Begin Planning Your Practicum During Year 1</i>			
Required Core Course (15 credits)		Credits	Semester Offered
PUBH 6001	Biological Concepts for Public Health	2	Fall, Spring, Summer I
PUBH 6002	Biostatistical Applications for Public Health	3	Fall, Spring, Summer 10 weeks
PUBH 6003	Principles & Practice of Epidemiology	3	Fall, Spring Summer 10 weeks
PUBH 6004	Environmental & Occupational Health in a Sustainable World	2	Fall, Spring, Summer I
PUBH 6006	Management and Policy Approaches to Public Health	3	Fall, Spring, Summer 10 weeks
PUBH 6007	Social & Behavioral Approaches to Public Health	2	Fall, Spring, Summer I
Required Departmental Courses (12 credits)			
PUBH 6247	Design of Health Studies	3	Fall, Spring
PUBH 6249	Use of Statistical Packages: Data Management and Data Analysis	3	Fall, Spring
PUBH 6252	Advanced Epidemiology Methods	3	Fall, Spring
PUBH 6260	Advanced Data Analysis for Public Health	3	Fall, Spring
Required Program-Specific Courses (4 credits selected from list of Epidemiology Content Foundation Courses below:)			
PUBH 6237	Chronic Disease Epidemiology	2	Fall
PUBH 6241	Nutritional Epidemiology	2	Fall
PUBH 6242	Clinical Epidemiology and Public Health: Reading the Research	2	Spring
PUBH 6244	Cancer Epidemiology	2	Spring
PUBH 6245	Infectious Disease Epidemiology	2	Spring
PUBH 6248	Epidemiology of Aging	2	Fall
PUBH 6250	Epidemiology of HIV/AIDS	2	Fall
PUBH 6259	Epidemiology of Surveillance in Public Health	2	Spring
Program-Specific Electives (4 credits)- Select from List below:			
<i>Select from list below</i>			
PUBH 62xx	Any Epi-Bio courses	1-3	Fall, Spring, Summer
PUBH 6121	Environmental and Occupational Epidemiology	3	Fall/Spring
PUBH 6127	Germs: Introduction to Environmental Health Microbiology	2	Fall
PUBH 6484	Prevention and Control of Vector Borne Disease	2	Spring
PUBH 6486	Global Health Programs and Approaches to the Control	2	Fall

	of Infectious Diseases		
EXNS 6208	Physical Activity: Physiology and Epidemiology	2	Fall/Spring
Electives (6 credits from any SPH graduate level courses)		varies	Fall, Spring, Summer
Other Required Courses			
PUBH 6014	Practicum	2	See Advisor
PUBH 6015	Culminating Experience	2	See Advisor
Course Distribution		Credits	
Public Health Core Courses		15	
Required Departmental Courses		12	
Required Program-Specific Courses		4	
Program-Specific Electives		4	
School of Public Health Electives		6	
Practicum		2	
Culminating Experience		2	
Total Degree Credits		45	

MPH Graduation Requirements

1. **Graduate Credit Requirement.** 45 graduate credits are required.
2. **Course Requirements.** Successful completion of the Core Courses and the Program-Specific Courses 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 four years.
5. **Transfer Credit Policy.** Up to 12 graduate credits that have not been applied to a previous graduate degree may be transferred to the MPH. External credits must have been earned from an accredited institution in the last three (3) years with a grade of 3.0 (B) or better. SPH Graduate Certificate students can transfer as many credits as meet program requirements, up to 18 credits, to the MPH. Graduate Certificate students wishing to transfer to a degree program may apply to do so via the online change of concentration petition after completion of three (3) or more courses and a cumulative GPA of 3.0 or better. A grade of B or better is required for a course to be eligible for transfer.
6. **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 <https://about.citiprogram.org/en/homepage/> in Human Research Subjects.
7. **Integrity Quiz & Plagiarism Quiz 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: <http://publichealth.gwu.edu/integrity>.
8. **Professional Enhancement requirement:** Students must participate in 8 hours per degree program of pre-approved 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!

Students will be assigned to a faculty member affiliated with this MPH Program for academic advising. Always consult with your advisor for course scheduling and sequencing strategies, but remember that proper course selection, fulfilling requirements, and on-time graduation are your responsibilities. Students and advisors are expected to meet regularly, at least once per term.

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

- Required Core Courses
- Required Department and Program-Specific Courses
- Electives
- Required Practicum and Culminating Experience

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).
- Students may take core courses in any order, though advisors often have recommendations.

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 their second and third years.

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.

Practicum-Students should begin planning their practicum at the halfway mark of their program at least one semester before you wish to begin the practicum. Please consult with the departmental practicum coordinators and your advisor regarding requirements.

Culminating Experience-The culminating experience may be done concurrently or following the practicum. Planning for the culminating experience should also begin at least one semester before you wish to register for the course.

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

Below find sample course schedules, Table 1 (full time students) and Table 2 (part time students) for Epidemiology MPH students.

SAMPLE SCHEDULE for MPH in Epidemiology- 45 credits

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

Semester	Cr	Course #	Course Name
Fall 1st year 10 credits	2	PUBH 6001	Biological Concepts for Public Health
	3	PUBH 6003	Principles and Practice of Epidemiology
	3	PUBH 6002	Biostatistical Applications for Public Health
	2	PUBH 6004	Environmental & Occupational Health in a Sustainable World
Spring 1 st year 10 credits	3	PUBH 6006	Management and Policy Approaches to Public Health
	3	PUBH 6247	Design of Health Studies
	2	PUBH 6xxx	Epidemiology Content Course*
	2	PUBH 6xxx	Epi-Bio or SPH electives
Summer 1 st year 4 credits	2	PUBH 6007	Social & Behavioral Science Methods
	2	PUBH 6xxx	Epi-Bio or SPH electives
Fall 2 nd year 10 credits	3	PUBH 6xxx	Epi-Bio or SPH electives
	3	PUBH 6249	Use of Statistical Packages
	2	PUBH 6xxx	Epidemiology Content Course*
	2	PUBH 6014	Practicum
Spring 2 nd year 9 credits	3	PUBH 6260	Advanced Data Analysis for Public Health
	3	PUBH 6252	Advanced Epidemiologic Methods
	2	PUBH 6015	Culminating Experience
	1	PUBH 6xxx	Epi-Bio or SPH elective
Summer 2 nd year 2 credits	2	PUBH 6xxx	Epi-Bio or SPH electives
Total	45		

*Epidemiology Content Courses include: 6237, 6241, 6242, 6244, 6245, 6248, 6250, and 6259

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

Semester	Cr	Course #	Course Name
Fall 1st year 6 credits	3	PUBH 6003	Principles and Practice of Epidemiology
	3	PUBH 6002	Biostatistical Applications for Public Health
Spring 1 st year 6 credits	2	PUBH 6004	Environmental and Occupational Health in a Sustainable World
	2	PUBH 6001	Biological Concepts for Public Health
	2	PUBH 6xx	Epi-Bio or SPH Electives
Summer 1 st year 3 credits	2	PUBH 6007	Social & Behavioral Science Methods
	1	PUBH 6xxx	Epi-Bio or SPH Elective
Fall 2 nd year 7 credits	3	PUBH 6249	Use of Statistical Packages
	3	PUBH 6247	Design of Health Studies
	1	PUBH 6xxx	Epi-Bio or SPH Elective
Spring 2 nd year 7 credits	2	PUBH 6xxx	Epidemiology Content Course*
	3	PUBH 6252	Advanced Epidemiological Methods
	2	PUBH 6xxx	Epi-Bio or SPH Electives
Summer 2 nd year 3 credits	3	PUBH 6006	Management and Policy Approaches to Public Health
Fall 3 rd year 7 credits	2	PUBH 6014	Practicum
	3	PUBH 6260	Advanced Data Analysis
	2	PUBH 6xxx	Epi-Bio or SPH Electives
Spring 3 rd year 6 credits	2	PUBH 6015	Culminating Experience
	2	PUBH 6xxx	Epidemiology Content Course*
	2	PUBH 6xxx	Epi-Bio or SPH Electives
Total	45		

*Epidemiology Content Courses include: 6237, 6241, 6242, 6244, 6245, 6248, 6250, and 6259