Milken Institute School of Public Health
THE GEORGE WASHINGTON UNIVERSITY

PhD Epidemiology
2026-2027

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

Application Due Date: December 1st

PROGRAM DIRECTOR

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MISSION

The mission of the Epidemiology PhD program in the Milken Institute School of Public Health at the George Washington University is to prepare students for careers in epidemiologic research in academic, government, or industry settings.

PROGRAM GOALS

The goals of the PhD program are to ensure graduates:

- Gain knowledge across a wide range of epidemiologic theories and methods;
- Gain specific knowledge of epidemiology in one or more of the following areas: infectious disease, chronic disease, environmental and occupational health, or physical activity;
- Understand general and specialized advanced epidemiologic concepts;
- Understand how to apply statistical methods to biological/biomedical sciences and health services;
- Understand and abide by guidelines for ethical treatment of research participants;
- Conduct and analyze data from a research study;
- Disseminate research findings to scientific and lay audiences.

PROGRAM REQUIREMENTS

Students will complete this 48-credit program by taking Foundational Courses, Required Courses, Tailoring Courses, and credit hours focused on Proposal Writing and Dissertation Research.

Doctoral students are required to pass a written comprehensive examination and complete a dissertation. For the comprehensive examination the student must demonstrate advanced knowledge of epidemiologic and biostatistical methods. For the dissertation, the student must design and execute an original research study that contributes new knowledge to the field and demonstrates proficiency in using advanced analytic methods.

COMPETENCIES

At the completion of the doctoral program in epidemiology students will be able to:

- Demonstrate knowledge of advanced epidemiologic concepts including assessment of bias, confounding, issues with measurement, and modeling
  Courses: PUBH 6252, PUBH 8419, PUBH 8877, PUBH 8999
- Design epidemiological research studies including identification and development of data sources and data collection instruments and recognition of measurement issues
  Courses: PUBH 8475; PUBH 6247; PUBH 6252; PUBH 6866, PUBH 6869, PUBH 8283, PUBH 8419, PUBH 8435, PUBH 8999
- Evaluate published epidemiologic and biomedical research and Identify gaps and/or limitations of the research
  Courses: PUBH 6247; PUBH 6252, PUBH 8099; PUBH 8435; PUBH 8999
- Conduct, evaluate, and interpret statistical analysis and assess data collection instruments
  Courses: PUBH 6252, 6865, PUBH 6866, PUBH 6869, PUBH 8283, PUBH 8364, PUBH 8419, PUBH 8877, PUBH 8999
- Disseminate and communicate epidemiological research findings
  Courses: PUBH 6247, PUBH 6252, PUBH 8099, PUBH 8999

ADMISSIONS REQUIREMENTS

The Doctor of Philosophy Program is intended for professionals seeking to become public health researchers. Applicants who have completed an MPH degree from a Council of Education for Public Health (CEPH) accredited Program, or who hold a graduate degree in a related field will be considered for admission to the PhD Program. Applicants may indicate their relevant training, work and/or research experience, or educational background that may have prepared them for doctoral level training in Public Health. As an accredited School of Public Health, the curriculum in all graduate academic programs must provide a foundation in public health. All graduate students without a prior degree from a CEPH-accredited school or program of public health will be required to successfully pass the zero-credit, free, online Pathways to Public Health (PUBH 6080) course within one year of matriculation.

For the PhD, qualified applicants with degrees from institutions in foreign countries are also eligible for admission. The Graduate Record Exam (GRE) scores are optional but must be taken within five years of the date of application. Because admission to this program is highly selective, successful applicants should have competitive academic credentials and substantial prior public health professional work experience related to the specialty field to which they are applying. Applicants should be aware that graduate courses taken prior to admission while in non-degree status may not be transferable into those programs.

REQUIRED COURSES <u>PRIOR TO ADMISSION CONSIDERATION</u> (or equivalents to these GW courses)

The courses listed below (or equivalents) are <u>required prior to admission consideration</u> and **MUST** clearly appear on an undergraduate or graduate transcript by name, credit hour, and letter grade.

PUBH	6003	Principles and Practices of Epidemiology	3	General principles, methods, and applications of epidemiology. Outbreak investigations, measures of disease frequency, standardization of disease rates, study design, measures of association, hypothesis testing, bias, effect modification, causal inference, disease screening, and surveillance.
BISC	1115/1125	Introductory Biology: Cells and Molecules	4	Lecture (3 hours), laboratory (1 credit/3 hours). Cellular and developmental biology, genetics, and molecular biology.
BISC	1116/1126	Introductory Biology: Biology of Organisms	4	Lecture (3 hours), laboratory (1 credit/3 hours). Concepts and methods in the study of whole organisms. Evolutionary theory; population biology; diversity of animals, fungi, and microorganisms; ecology and behavior; and animal structure and function.
MATH	1231	Single-Variable Calculus I	3	Limits and continuity. Differentiation and integration of algebraic and trigonometric functions with applications.
MATH	1232	Single-Variable Calculus II	3	The calculus of exponential and logarithmic functions. L'Hopital's rule. Techniques of integration. Infinite series and Taylor series. Polar coordinates. Prerequisite: Math 1231

PREREQUISITE COURSES FOR ADMISSION CONSIDERATION (or equivalents to these GW courses)

The courses listed below are additional prerequisite course requirements. Applicants lacking these courses (or equivalents to these GW courses) will be considered for admission but will only be admitted conditionally with the expectation that these courses will be completed within the first semester following matriculation in the program. Credits for these courses do not count toward the 48-credit graduation requirement, nor are grades earned in these additional courses reflected in the overall grade-point average.

MATH	2184	Linear Algebra I	3	Linear equations, matrices, inverses, and determinants. Vector spaces, rank, eigenvalues, and diagonalization. Applications to geometry and ordinary differential equations. Prerequisite: MATH 1231
STAT *-or-*	2183	Intermediate Statistical Laboratory: Statistical Computing Packages	3 *-or-*	Application of program packages (e.g., SAS, SPSS) to the solution of one-, two- and k-sample parametric and nonparametric statistical problems. Basic concepts in data preparation, modification, analysis and interpretation of results. Prerequisite: an introductory statistics course.
PUBH	6853	Use of Statistical Packages: Data Management and Data Analysis	3	This course familiarizes the student with one of the most widely used database management systems and statistical analysis software packages, the SAS System, operating in a Windows environment. Throughout the course, several database management system techniques and data analytical strategies for the appropriate analysis of datasets obtained from a variety of studies will be presented. Statistical techniques covered include linear regression, analysis of variance, logistic regression, and survival analysis.

Students without a prior degree from a CEPH-accredited school or program of public health will be required to successfully pass the zero-credit, online course *Pathways to Public Health (PUBH 6080)* within one year of matriculation. There is no fee for this course.

PHD EPIDEMIOLOGY DEGREE REQUIREMENTS

Course Distribution Summary	**Credits**
Required PhD Foundation Courses	5
Required Program Specific Courses	19
Tailoring Courses	12
Proposal writing *Note: may be waived and credits replaced with dissertation credits with permission of Program Director*	2
Dissertation Research	10
Students have 7 years to complete all degree requirements from matriculation.	**48**

GRADUATION REQUIREMENTS

All students accepted to this PhD program must follow the policies and regulations outlined in the GW Bulletin and the GWSPH Student Handbook. This includes, but is not limited to:

- Minimum Grade Point Average (GPA)
- Minimum Course Grades
- Continuous Enrollment
- Maximum Time to Degree
- Required Minimum Degree Credits
- Transfer Credit Policy
- CITI Training
- Integrity Quiz and Plagiarism
- Professional Enhancement (PE) Hours
- PUBH 6080 Pathways to Public Health
- Graduate Teaching Assistantship Program
- Comprehensive Examination
- Culminating Experience (Dissertation)

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Program-at-a-Glance 2026-27

Required PhD Foundation Credits 5 Credits			
		Credits	**Semester Offered**
PUBH 6080	Pathways to Public Health*	0	Fall, Spring, Summer
PUBH 8475	Research Ethics and Integrity in Domestic and International Research	1	Fall, Summer
PUBH 6247	Epidemiologic Methods 1: Design of Health Studies** ***Basis for PhD General Comprehensive Exam***	3	Fall, Spring
PUBH 8001	PhD Seminar- Cross Cutting Concepts in Public Health	1	Fall
Required Program Specific Courses 19 credits			
PUBH 6252	Epidemiologic Methods 2: Advanced Epidemiologic Methods ***Basis for PhD General Comprehensive Exam***	3	Fall, Spring
PUBH 6865	Applied Categorical Data Analysis	3	Spring
PUBH 6866	Principles of Clinical Trials	3	Spring
PUBH 6868	Quantitative Methods	3	Spring
PUBH 6869	Principles of Biostatistics Consulting-can be waived and replaced with electives or dissertation credit	1	Spring
PUBH 8419	Measurement in Public Health and Health Services ***Basis for PhD General Comprehensive Exam***	3	Spring
PUBH 8877	Generalized Linear Models in Biostatistics ***Basis for PhD General Comprehensive Exam***	3	Fall
Tailoring Courses (Minimum 12 Credits) Any PUBH or STAT graduate level course *(all prerequisites must be met)* (Other elective courses outside of SPH may be taken with advanced approval) Sample list (not exclusive)			
Epidemiology Elective Courses		**Credits**	**Semester Offered**
PUBH 62xx	Epidemiology Topical Courses	1-3	Summer, Fall, Spring
PUBH 6242 + 8242	Clinical Epidemiology and Public Health: Reading the Research + Doctoral Topics	2+1	Spring
PUBH 6244+ 8244	Cancer Epidemiology + Doctoral Topics	2+1	Spring
PUBH 6245 + 8245	Infectious Disease Epidemiology + Doctoral Topics	2+1	Spring
PUBH 6250+ 8250	Epidemiology of HIV/AIDS +Doctoral Topics	2+1	Fall
PUBH 6259+8259	Epidemiologic Surveillance in Public Health +Doctoral Topics	2+1	Spring

Biostatistics Elective Courses		Credits	Semester Offered
PUBH 6862	Applied Linear Regression Analysis for Public Health Research	3	Fall
PUBH 6864	Applied Survival Analysis for Public Health Research84	3	Spring
PUBH 6887	Applied Longitudinal Data Analysis for Public Health Research	3	Spring
PUBH 6860	Principles of Bioinformatics	3	Fall
PUBH 6861	Public Health Genomics	3	Spring
PUBH 68xx	Biostatistics and Bioinformatics Topical Courses	1-3	Summer, Fall, Spring
PUBH 8878	Statistical Genetics	3	Spring
Dissertation Research (12 Credits)			
PUBH 8210	Professional Skills Enhancement for Doctoral Students in Epidemiology	0	Yearlong following completion of comprehensive exams
PUBH 8435	PhD Proposal Development (Note: May be waived by the Program Director. Waiver of the course credits replaced by dissertation credits.)	2	Fall, Spring
PUBH 8999	Dissertation Research for PhD Epidemiology Students	10 credits	Summer, Fall, Spring

**Pathways to Public Health (PUBH 6080) may be waived for students who matriculate with a prior degree from a CEPH-accredited institution.*
***Students with an MPH and an equivalent course may waive and replace this course with elective credits.*

Course Descriptions and Registration information can be found on the website: http://publichealth.gwu.edu/academics/

PHD ADVISING NOTES

Comprehensive Examination and Dissertation

Once the course of study is completed, students are required to pass the Comprehensive Examination, Part I.

Students are required to complete 9 credits in dissertation research. Once the proposal has been successfully defended (Comprehensive Examination Part II) and the dissertation research credit requirement has been met, the oral defense may be scheduled.

Students must complete Comprehensive Examination Parts I and II and have the dissertation proposal approved by the IRB to be officially admitted to the candidacy phase.

Graduation

While degrees are awarded at the end of each semester, formal commencement ceremonies occur only in May, including the doctoral hooding ceremony. Students are eligible to participate in graduation activities only after they have completed all degree requirements and have no financial obligations to the University. Students may include PhD designation after their name upon completion of all degree requirements.