

### Program Co-Directors

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### Mission

The mission of the 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.

### Course Requirements

All GW School of Public Health and Health Services (SPHHS) MPH students who select the MPH Epidemiology Program enroll in Core Courses (16 credits), Program-Specific Courses (21 credits), and Electives (4 credits). The total 45 credit degree program also includes a Practicum (2 credits) and a Culminating Experience (2 credits) where students apply their didactic education in a real world setting. The curriculum sheets that follow describe the requirements for the MPH in Epidemiology.

### Program-Specific Competencies

The Epidemiology specialization prepares students for epidemiological research and evaluation in academic, governmental, private-sector, and community health care sites. The curriculum prepares students to design and conduct studies, manage health data, and make leadership decisions in public health and clinical epidemiology. The following competencies were developed in concert with professors of epidemiology courses (at GWU as well as other CEPH-accredited MPH programs), epidemiology textbooks, conversations with prospective employers likely to hire MPH-epidemiology graduates, and experience teaching epidemiology courses to MPH students. ASPH Education Committee competencies were also consulted.

Upon completion of the MPH in Epidemiology, students will demonstrate functional competence to:

- Apply epidemiological and biomedical concepts in identifying and describing the determinants and the distribution of disease in human populations. Relevant courses: PubH 247, 249, 252, 260
- 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 209\*, 242, 244, 245, 246, 248, 250, 259, 247, 249, 252, 260

- Enumerate and apply underlying principles and methods to design, plan, and conduct epidemiologic studies including observational and experimental designs, screening programs, public health surveillance, and other epidemiologic designs. Relevant courses: PubH 209\*, 247, 249, 252, 260
- Identify the appropriate data analysis methods, conduct data analysis using a computerized software program, and interpret the results from epidemiological studies. Relevant courses: PubH 249, 252, 260
- Demonstrate proficiency in constructing and managing databases from epidemiological studies using statistical software, e.g. The SAS<sup>®</sup> System. Relevant courses: PubH 209\*, 249, 260
- Synthesize data and relevant literature to interpret findings in a causal framework, write manuscripts, and make oral presentations. Relevant courses: PubH 209\*, 247, 249, 252, 260
- Work in a multidisciplinary research team and recognize and appropriately respond to ethical and legal issues that arise in research. Relevant courses: PubH 209\*, 247
- 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, including emerging infectious diseases, drug resistant pathogens, and perinatal and neonatal infections.
  - Methods and issues in injury epidemiology related to intentional and unintentional injury with focus on injuries occurring in transportation, occupational, home, and recreational environments.
  - Methods and issues of cancer epidemiology including descriptive and analytical studies with emphasis on genetic and molecular epidemiology.
  - Methods and issues of chronic disease specifically those affecting older populations.
  - Methods and issues of surveillance systems in public health.

Relevant courses: PubH 209\*, 242, 244, 245, 246, 248, 250, 259

\*Selected epidemiology-biostatistics topics/electives including 258 and 262

### **Sample Capstone Project Topics**

#### Cancer:

- Inflammatory Breast Cancer
- Disparities in Cancer Diagnosis and Treatment
- Associations between Behavioral Factors and Cancer

#### HIV/AIDS:

- Use of Technology in the Care of HIV-Infected Individuals
- Care of Pediatric and Adolescent HIV-Infected Patients
- Adherence to Antiretroviral Medications
- Development of Resistance to Antiretroviral Medications

#### Infectious Disease:

- Listeria at Meat Packaging Plants
- Food Contamination and Surveillance

#### Other:

- Racial/Ethnic Disparities in Low Birth Weight
- Use of Standardized Case Definitions in Adverse Events following Immunization Surveillance

**Please see the curriculum sheets that follow.**

THE GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER WASHINGTON DC	<b>School of Public Health and Health Services</b>  <b>Master of Public Health          Epidemiology Program</b>  <b>Program-at-a-Glance          2010-2011</b>			
<b>Required Core Courses</b>				
<b>Required Core Courses</b>		<b>Credits</b>	<b>Semester Offered</b>	<b>Grade</b>
PubH 201	Biological Concepts for Public Health	2	Fall, Spring, Summer I	
PubH 202	Biostatistical Applications for Public Health	3	Fall, Spring, Summer 10 wk	
PubH 203	Principles and Practice of Epidemiology	3	Fall, Spring, Summer 10 wk	
PubH 204	Environmental and Occupational Health in a Sustainable World	2	Fall, Spring, Summer I	
PubH 205	Policy Approaches to Public Health	2	Fall, Spring, Summer 10 wk	
PubH 207	Social and Behavioral Approaches to Public Health	2	Fall, Spring, Summer I	
PubH 208	Management Approaches to Public Health	2	Fall, Spring, Summer 10-wk	
Total	Core Credits	16		
<b>Required Program-Specific Courses</b>				
<b>Required Program Specific Courses</b>		<b>Credits</b>	<b>Semester Offered</b>	<b>Grade</b>
PubH 247	Design of Health Studies	3	Fall, Spring	
PubH 249	Use of Statistical Packages: Data Management and Data Analysis	3	Fall, Spring	
PubH 252	Advanced Epidemiology Methods	3	Fall, Spring	
PubH 260	Advanced Data Analysis for Public Health	3	Fall, Spring	
PubH 261	Epidemiology and Biostatistics Skills Building Seminar	1	Fall, Spring, Summer I	
Sub-total	Methods Courses	13		
<b>Epidemiology Content Foundation Courses</b> Select at least 4 credits from the list below.				
<i>PubH 242</i>	Clinical Epidemiology and Decision Analysis	2	Spring	
<i>PubH 244</i>	Cancer Epidemiology	2	Spring	
<i>PubH 245</i>	Infectious Disease Epidemiology	2	Spring	
<i>PubH 246</i>	Injury Epidemiology and Prevention	2	TBA	
<i>PubH 248</i>	Epidemiology Methods in Older Populations	2	TBA	
<i>PubH 250</i>	Epidemiology of HIV/AIDS	2	Fall	
<i>PubH 259</i>	Epidemiology Surveillance in Public Health	2	Spring	
Sub-total	Epidemiology Content Foundation Credits	4		

Curriculum continued on next page . . .

Select 4 credits from Department of Epidemiology-Biostatistics Electives			
Select at least 4 credits from the list below. May also use credits from the Content Foundation Courses above.			
<i>PubH 253</i>	Issues in HIV Care and Treatment	1	Fall
<i>PubH 255</i>	Organizational Responses to the HIV/AIDS Epidemic	2	Spring
<i>PubH 258</i>	Advanced Topics in Biostatistical Consulting (Instructor's Approval Required)	1	Spring
<i>PubH 262</i>	Introduction to Geographic Information Systems	1	Summer, Fall, Spring
<i>PubH 263</i>	Advanced GIS	1	Fall, Spring
<i>PubH 267</i>	Time Series Applications in Public Health	1	Spring
<i>PubH 268</i>	Advanced SAS	1	Summer
<i>PubH 269</i>	Reproductive and Perinatal Epidemiology	1	Summer
<i>PubH 271</i>	Disaster Epidemiology: Methods and Applications	1	Summer
<i>PubH 270</i>	HIV/AIDS Surveillance	1	Summer
<i>PubH 272</i>	Epidemiology of Infectious Agents Associated with Human Cancer	1	Summer
<i>PubH 273</i>	Ethnographic Methods as Applied in Public Health	1	Fall
<i>PubH 274</i>	Emerging Infectious Diseases for Public Health Professionals	2	Fall
<i>PubH 350</i>	Prevention and Control of Vector Borne Disease	2	Spring
<i>PubH 353</i>	Control of Water and Sanitation Related Diseases	1	Summer
<i>PubH 209</i>	Genetic and Molecular Epidemiology	1	Summer
<i>PubH 209</i>	Behavioral Epidemiology	1	TBA
<i>PubH 209</i>	Analysis of Complex Survey Data Using SUDAAN	1	TBA
<i>PubH 209</i>	Pesticide Exposures and Cancer	1	Summer
<i>PubH 209</i>	Nutritional Epidemiology	1	Summer
<i>PubH 209</i>	Others to be announced	1-2	TBA
Sub-total	Epi-Bio Electives	4	
<b>Electives</b>	Any SPHHS graduate course(s)	4	Summer, Fall, Spring
PubH 214.13	Practicum IMPORTANT: PubH 261 is a co-requisite for the Practicum.	2	See advisor
PubH 215.13	Culminating Experience	2	See advisor
Course Distribution		Credits	
Public Health Core Courses		16	
Program-Specific Courses		21	
Electives		4	
Practicum		2	
Culminating Experience		2	
<b>Total</b>	<b>Degree Credits</b>	<b>45</b>	

\* Proposed Courses. Pending assignment of permanent course number, may be taken as PubH 209 topics courses.

School of Public Health and Health Services

Master of Public Health and Graduate Certificate Program Option

Epidemiology

2010-2011

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

**Graduation Requirements  
MPH**

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. Up to 18 credits may be transferred to the MPH from the SPHHS 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.

**Graduation Requirements  
Graduate Certificate**

1. **Graduate Credit Requirement.** 18 graduate credits are required.
2. **Graduate Credit Requirement for students enrolled concurrently in a SPHHS Degree Program.** 12 credits are required.
3. The Program Director/Advisor must pre-approve all course selections and course sequencing by developing a "program of study" prior to the student's initial registration. Graduate Certificate students meet with their advisor each semester before registration. All changes in this program of study must be pre-approved by the Program Director/Advisor.
4. **Course Requirements.** Since most graduate certificate students are currently enrolled in an MPH program or have previously earned a graduate degree, most course credits will be selected from the program-specific course list. Under no circumstances may a certificate student enroll in fewer than 9 credits of program-specific courses.
5. **Grade Point Requirement.** A 3.0 (B average) overall grade point average or better is required.
6. **Time Limit Requirement.** The certificate must be completed within two years.
7. **Transfer Credit Policy.** The Program Director/Advisor may approve up to 4 graduate credits that have not been applied to a previous graduate degree to be transferred to the graduate certificate. (Exceptions: SPHHS master's students and alumni may transfer up to 6 credits from master's degree to the Graduate Certificate.) The course(s) must be relevant to the 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.

**Core Courses  
16 Credits**

PubH	201	Biological Concepts for Public Health	2	Provides an overview of current knowledge about biological mechanisms of major diseases causing death and disability in the US and globally; understanding and interpreting the reciprocal relationships of genetic, environmental, and behavioral determinants of health and disease in an ecologic context; analyzing, discussing, and communicating biologic principles of disease from a public health perspective. Fall, Spring, Summer 1
PubH	202	Biostatistical Applications for Public Health	3	Application of biostatistical principles to critical analysis of retrospective studies, prospective studies, and controlled clinical trials, as well as studies in the health services literature. Selection, basic calculations, and interpretation of statistical methods for detection of significant associations and differences. Fall, Spring, Summer 10 weeks

PubH	203	Principles and Practice 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. Case studies apply these concepts to a variety of infectious, acute, and chronic health conditions affecting the population. Fall, Spring, Summer 10 weeks
PubH	204	Environmental and Occupational Health in a Sustainable World	2	Examines the connection between population health and exposures to chemical, physical, and biological agents in the environment. Through the use of problem-solving frameworks, students will become familiar with data sources, methodologies and policy approaches being used to address the public health impacts of environmental and occupational health hazards, including the consequences of climate change, natural resource degradation, and industrial chemicals. The course will integrate key concepts of environmental health with principles of sustainability to illustrate how public policies and practices on the local, national and global level affect population health. Fall, Spring, Summer 1
PubH	205	Policy Approaches to Public Health	2	Introductory multidisciplinary course focusing on the interplay of all aspects of global public health on health policy problems. Students will learn how health policy is made, how health care and public health services are delivered, and how to define and analyze key health policy problems drawing on the perspectives and skills of the public health disciplines. Fall, Spring, Summer 10 weeks
PubH	207	Social and Behavioral Approaches to Public Health	2	This course will emphasize social and behavioral science theories, models, and concepts that can be applied to public health problems and interventions. This course will describe the role of social and community factors, including race/ethnicity and culture, in both the onset and solution of public health problems and describe the inter-relationship between the social and behavioral science. Fall, Spring, and Summer 1
PubH	208	Management Approaches to Public Health	2	An advanced multidisciplinary course examining global public health and health delivery issues through the use of a case study approach. Prerequisites: PubH 201, 202, 203, 204, 205, 207. Fall, Spring , Summer 10 Weeks
<b>Program Specific Courses, Selectives, Electives and Practicum and Culminating Experience 29 Credits</b>				
PubH	247	Design of Health Studies	3	Epidemiologic concepts and methods applied to specific research questions especially new types of public health problems. Recognition and development of the most appropriate study design for a specific health issue. Ecologic, cross-sectional, case-control, cohort studies and clinical trials. Sampling, measurement, questionnaire design, causality and causal criteria. Development of a research proposal. Prerequisite: PubH 203. Fall, Spring
PubH	249	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. Prerequisite: PubH 202. Fall, Spring
PubH	252	Advanced Epidemiology Methods	3	Advanced quantitative epidemiologic methods, with a focus on basic data analytic techniques, identifying and evaluating bias and adjusting for confounding. Dose-response, trend analysis, and multiple linear and logistic regression models. Prerequisites: PubH 202, 203,247; Pre or co-requisite: PubH 249. Fall, Spring

PubH	260	Advanced Data Analysis for Public Health	3	Advanced data analysis using the SAS System to expand on the analytic techniques gained in PubH 202 and PubH 249 and to provide students with the applied statistical skills required to analyze various types of public health datasets. Prerequisites: PubH 202, 249. Fall, Spring
PubH	261	Epidemiology & Biostatistics Skills Building Seminar	1	Assists students in developing the skills needed to complete the practicum and culminating experience. Provides students with practical applied public health training. Prerequisites: PubH 202, 203, 205. Co-requisites: PubH 214.13, 247, 249. Fall, Spring, Summer I
PubH	242	Clinical Epidemiology and Decision Analysis	2	Quantitative and qualitative approaches to decision making, including risk- benefit analysis, decision analysis, and cost-effective analysis. Applications to technology assessment; development of clinical guidelines. PubH 202.203, Spring Note: MPH Health Policy and Doctoral Students concurrently take PubH 209 topics course by the same name for 1 credit.
PubH	244	Cancer Epidemiology	2	Epidemiology of specific cancers, with an emphasis on molecular and genetic epidemiology. Current research in the field. Prerequisites: PubH .203, Spring
PubH	245	Infectious Disease Epidemiology	2	The role and conduct of laboratory and field investigations in the epidemiology of infectious diseases. Prerequisite, PubH 203, Spring
PubH	246	Injury Epidemiology and Prevention	2	Epidemiologic knowledge and prevention strategies for intentional and unintentional injuries, including those occurring in transportation, occupational, home, and recreational environments. Research methods, sources of data, and application to injury prevention. Prerequisite, PubH 203, Fall
PubH	248	Epidemiology Methods in Older Populations	2	Methodological challenges in studying older populations. Epidemiologic endpoints in aging populations. Basic concepts and theories explored in aging research. Prerequisite, PubH 203, Fall
PubH	250	Epidemiology of HIV/AIDS	2	Methodological issues central to HIV/AIDS research. Biases peculiar to HIV/AIDS epidemiologic studies (both observational and experimental designs). The natural history of HIV, diagnosis, surveillance, vulnerable subpopulations, behavioral facets, and evaluation of epidemiologic studies with an emphasis on methodological considerations. Prerequisite, PubH 203, Recommended 202 Fall
PubH	259	Epidemiology Surveillance in Public Health	2	Focus on foundations of public health surveillance systems for communicable as well as chronic diseases. Outbreak investigation methods will be included, as well as surveillance data sources, data management, data analysis, ethical issues, surveillance system evaluation, and use of information for prevention. Surveillance systems for reportable diseases, nosocomial infections, bioterrorism events, cancer, environmental disease, vaccine-related adverse events, bovine spongiform encephalopathy, and military personnel will be discussed. Prerequisites PubH203. Spring
PubH	253	Issues in HIV Care and Treatment	1	This course will provide an overview and in depth consideration of some of the major issues in treatment of HIV disease, including the assessment of efficacy and effectiveness, drug resistance, monitoring of drug toxicity, special populations, the interrelationship between treatment and prevention, and quality of care. The course has been designed with an interdisciplinary audience in mind. In discussions and assignments, students will be able to emphasize their own area of interest and/or expertise (e.g. epidemiology, policy, etc) Fall
PubH	255	Organizational Responses to the HIV/AIDS Epidemic	2	Focus on the epidemiology of HIV/AIDS on the local, national and global levels; guest speakers describing their public health organizations' responses to the epidemic; basic principles of leadership, management, and organizational strategy and structure in the context of HIV/AIDS organizations; and interactive dialogues to explore the strengths and challenges of various organizational approaches to the epidemic. Prerequisite: PubH 250, PubH 388 , or permission of Instructor. Spring

PubH	258	Advanced Topics in Biostatistical Consulting (Instructor's Approval Required)	1	Principles and practice of biostatistical consulting in public health and medical research environments. Spring
PubH	262	Introduction to Geographic Information Systems	1	Geographic information systems (GIS) for mapping and display of health data. The course makes use of ArcGIS 8.3. The use of spatial statistics for the detection of clusters and patterns in the spread of diseases. Working with geodatabases, shape files, layers, query information from attribute tables, geocode addresses and customizing GIS applications. Summer, Fall, Spring
PubH	263	Advanced GIS	1	Structured to provide mid to advanced level training in GIS for display and analysis of health data. Use software ArcGIS 9.3 and additional extensions such as Spatial Analyst and Geostatistical Analyst. Also uses GeoDa software. Emphasizes benefits of using GIS to do more than simply manage and map data. GIS supports a range of spatial analysis functions that enable researchers to extract additional meaning from manipulating geographic data. Learn to work with raster datasets and geodatabases to build spatial models for analyzing health data and evaluating spatial patterns of health events based on notion of distance. Prerequisite: PubH262. Fall, Spring
PubH	267	Time Series Applications in Public Health	1	Introduce basic concepts for the identification and modeling of time series in the time domain approach. Learn a new set of terminology standards and a different way to analyze these type of data and to forecast future values of a time series and its accuracy. Software used is SAS/ETS and 3 procedures: ARIMA, AUTOREG, FORECAST. New mathematical notation will be used. Prerequisite: PubH 249. Spring
PubH	268	Advanced SAS	1	Intensive in advanced programming using SAS. Expand technical skills to provide advanced SAS tools for data management and graphics. Topics to include Interactive Matrix Language (IML), SAS Macro facility language, and drill-down graphs using SAS/GRAPH. Prerequisites: PubH 202, 249 or Instructor's permission. Summer
PubH	269	Reproductive and Perinatal Epidemiology	1	Current research, controversial issues and methodological problems in epidemiology of reproductive and perinatal health. Present reproductive health issues such as conception and infertility; perinatal issues such as complications of pregnancy, infections in pregnancy, adverse pregnancy outcomes, and birth defects. Prerequisite: PubH 203. Summer
PubH	270	HIV/AIDS Surveillance	1	Overview of surveillance methods used domestically and internationally to monitor HIV/AIDS epidemic. Surveillance systems including sentinel, population based, behavioral, and incidence surveillance will be presented and discussed. Strengths and weaknesses of these various systems will be discussed in addition to how data from these systems impact and inform HIV/AIDS related policies and programs. Prerequisite: PubH 203. Summer
PubH	271	Disaster Epidemiology: Methods and Applications	1	Introduction to disaster epidemiology that elucidates the important role epidemiologists play in assessing the health and psychological effects of natural and man-made disasters and in identifying factors that contribute to these effects. Focus will be on applications of epidemiologic methods to the study of public health consequences of disasters, case studies from actual disasters used to illustrate various roles of epidemiologist in responding to these events and lessons learned. Highlight key skills that epidemiologists need to be part of a response and recovery . Identify methodological issues for future work. Prerequisites: PubH 202, 203. Summer
PubH	272	Epidemiology of Infectious Agents Associated with Human Cancer	1	Describes the role of infectious agents in the etiology of human cancer. Emphasis on differences between specific oncogenic viruses. Other oncogenic agents, bacterial and parasitic, will also be discussed. Discuss laboratory approaches to the documentation of their pathogenicity, how behavior affects mode of

				transmission, and which types of data provide strongest support for documenting oncogenic potential for humans. Prerequisite: PubH203. Summer
PubH	273	Ethnographic Methods as Applied in Public Health	1	Use ethnographic field methods in conjunction with epidemiological research. Introduction to specific methods used to examine health phenomena and determinants of disease. Learn specific applied skills that can be modified with socio-cultural modifications to evaluate urban sites and other settings. Basic skills in application of ethnographic methods, including recursive observations, participant observations, and variety of approaches to interviewing such as in-depth, structured and non-structured as well as conversational interviewing. Discuss use of multiple approaches in conjunction with ethnography, including focus groups, archival, document, statistical and secondary data analysis, and survey research methods. Course emphasizes use of ethnographic research methods in community-based health settings and evaluates issues in cultural competency and how to garner stakeholder support to conduct epidemiologic studies. Prerequisite: PubH 203. Fall
PubH	274	Emerging Infectious Diseases for Public Health Professionals	2	Focus on epidemiology of emerging infectious diseases of public health importance, including factors leading to their development, management of emerging infectious diseases from a public health and laboratory standpoint, including biosafety, and strategies for emergency preparedness from a national and international perspective. Course emphasizes the context of emerging infectious diseases and strategic approaches to their containment. Prerequisites: PubH 203 or Micr 292 or Instructor permission. Fall
PubH	350	Prevention and Control of Vector Borne Disease	2	Vector borne diseases involve a vector (carrier) that transmits a pathogen to a human host. This course introduces students to insects and other vectors that are responsible for transmission of diseases such as West Nile Virus, malaria, dengue fever, and elephantiasis. Students will learn how to recognize various disease vectors, how they transmit diseases, the diseases transmitted and methods for effective management and control. Prerequisite: PubH 321 Fall
PubH	353	Control of Water and Sanitation Related Diseases	1	Course under development. Summer
PubH	214.13	Practicum	1-3	This course provides the opportunity for MPH students to apply the knowledge and skills acquired through their programs of study. A planned, supervised and evaluated practice experience that is relevant to the student's program is an essential component of a public health professional degree program. These opportunities can take place in a variety of agencies or organizations. Each program customizes Practicum requirements to meet students' needs. (Credit/No Credit) Corequisite: PubH 261. Summer, Fall, Spring.
PubH	215.13	Culminating Experience	2-3	A culminating experience is one that requires a student to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice. It is through this course that faculty evaluates the extent to which the student has mastered the body of knowledge and can demonstrate proficiency in the required competencies. Each program customizes Culminating Experience requirements to meet students' needs. Summer, Fall, Spring

**NOTE: Always see your advisor for course scheduling and sequencing strategies, but remember that proper course selection, 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 201, 202, 203, 204, 205, 207, and PubH 208)
- Required Program-Specific Courses, including Epidemiology Content Foundation Courses and Epidemiology electives (Selectives)
- 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). This does not include PubH 208 (Management Approaches to Public Health), which should be taken in the second half of the program of study, and which requires every other core course as a pre-requisite.
- Further, we expect MPH students to complete the following MPH courses in the first two semesters of study:
  - PubH 201 – Biological Concepts for Public Health
  - PubH 202 – Biostatistics or PubH 203 – Epidemiology
  - PubH 205 – Policy Approaches to Public Health

These guidelines reinforce the principle that core courses should be taken early.

In order to help assure that all students complete core courses in the first year of study, SPHHS will offer all MPH Epidemiology 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. If the advisor and student agree that an exception is needed, the student should complete a Graduate Petition Form explaining the circumstances, obtain the academic advisor's signature, and submit the Petition to the SPHHS Office of Student Records, 202 Ross Hall. The Associate Dean for Student Affairs must approve such a petition before a student is permitted to defer any core courses to the second year.

Table 1 (full time students) and Table 2 (part time students) present sample course schedules that MPH Epidemiology students are required to take during their tenure at the SPHHS. It is noteworthy that fully 45 credits are required, including core courses (16 credits), program specific courses, including Epidemiology Content Foundation and Epidemiology Electives (21 credits), electives (4 credits), and the practicum (2 credits) and culminating experience (2 credits).

## GWU School of Public Health and Health Services - MPH in Epidemiology (45 cr)

### Sample Schedule for 2-Year Completion (Fall start)

Semester	Cr	Course #	Course Name	Time
<b>Fall 1<sup>st</sup> year</b> 10 credits	2	PubH 201	Biological Concepts for Public Health	Thurs 4:10-6:00 pm
	3	PubH 203	Principles and Practice of Epidemiology	Tues 6:10 – 9:00 pm or Fri 3:10 – 6:00 pm
	3	PubH 202	Biostatistical Applications for Public Health	Weds 6:10 – 9:00 pm or Mon 3:10-6:00 pm
	2	PubH 204	Environmental & Occupational Health in a Sustainable World	Tues 4:10 – 6:00 pm
Spring 1 <sup>st</sup> year 10 credits	2	PubH 205	Policy Approaches to Public Health	Thurs 6:10 – 8:00 pm
	3	PubH 247	Design of Health Studies	Wed 6:10-9:00 pm
	2	PubH 2xx	Epidemiology Content Course	
	3	PubH 2xx	Epi-Bio or SPHHS electives	
Summer 1 <sup>st</sup> year 4 credits	2	PubH 207	Social & Behavioral Science Methods	Summer I – Mon/Weds 3:45 – 6:00 pm
	2	PubH 2xx	Epi-Bio or SPHHS electives	
Fall 2 <sup>nd</sup> year 10 credits	2	PubH 208	Management Approaches in Public Health	Thurs 6:10-9:00 pm
	3	PubH 249	Use of Statistical Packages	Tues 6:10-9:00 pm + 1 hour computer lab
	2	PubH 2xx	Epidemiology Content Course	
	1	PubH 261	Epidemiology & Biostatistics Skills Bldg Seminar	Tues 4:10-6:00 pm
	2	PubH 214	Practicum	
Spring 2 <sup>nd</sup> year 9 credits	3	PubH 260	Advanced Data Analysis for Public Health	Tues 6:10-9:00 pm
	3	PubH 252	Advanced Epidemiologic Methods	Thurs 3:10-6:00 pm
	2	PubH 215	Culminating Experience	
	1	PubH 2xx	Epi-Bio or SPHHS elective	
Summer 2 <sup>nd</sup> year 2 credits	2	PubH 2xx	Epi-Bio or SPHHS electives	

### Epidemiology Content Courses

PubH 242	Clinical Epidemiology	Spring Every Year	Tues 4:10-6:00 pm
PubH 244	Cancer Epidemiology	Spring Every Year	Wed 4:10-6:00 pm
PubH 245	Infectious Disease Epidemiology	Spring Every Year	Mon 4:00-6:00 pm
PubH 246	Injury Epidemiology	Fall Every Year	Tues 4:10-6:00 pm
PubH 248	Epidemiologic Methods in Older Populations	Fall Every Year	Mon 6:10-8:00 pm
PubH 250	Epidemiology of HIV/AIDS	Fall Every Year	Thurs 4:10-6:00 pm
PubH 259	Epidemiologic Surveillance	Spring Every Year	Wed 6:10-8:00 pm

### **4 credits of Epi-Bio Electives –Any 2xx courses offered by the Epi-Bio Department or any of the above Epidemiology Content Courses**

#### 4 credits of SPHHS Electives-Any courses offered in the SPHHS

+ Both the Practicum and the Culminating Experience require substantial lead time to plan. Make sure that you start planning your Practicum the semester before you wish to conduct it. Make sure that you start planning your Culminating Experience approximately 2 semesters before you plan to complete it. GWU School of Public Health and Health Services

## MPH in Epidemiology (45 cr)

### Sample Schedule for 3-Year Completion (Fall start)

Semester	Cr	Course #	Course Name	Time
Fall 1 <sup>st</sup> year 6 credits	3	PubH 203	Principles and Practice of Epidemiology	Tues 6:10 – 9:00 pm or Fri 3:10 – 6:00 pm
	3	PubH 202	Biostatistical Applications for Public Health	Weds 6:10 – 9:00 pm or Mon 3:10-6:00 pm
Spring 1 <sup>st</sup> year 7 credits	2	PubH 204	Environmental and Occupational Health in a Sustainable World	Tues 6:10 – 8:00 pm
	2	PubH 201	Biological Concepts for Public Health	Thurs 4:10 – 6:00 pm
	2	PubH 205	Policy Approaches to Public Health	Thurs 6:10-8:00 pm
	1	Elective	Elective	
Summer 1 <sup>st</sup> year 3 credits	2	PubH 207	Social & Behavioral Science Methods	Summer I – Mon/Weds 3:45 – 6:00 pm
	1	PubH 2xx	Epi-Bio or SPHHS Elective	
Fall 2 <sup>nd</sup> year 7 credits	3	PubH 249	Use of Statistical Packages	Tues 6:10-9:00 pm + 1 hour computer lab Thurs 6:10-9:00 pm
	3	PubH 247	Design of Health Studies	
	1	PubH 2xx	Epi-Bio or SPHHS Electives	
Spring 2 <sup>nd</sup> year 7 credits	2	PubH 2xx	Epidemiology Content Course	Thurs 3:00-5:50 pm
	3	PubH 252	Advanced Epidemiological Methods	
	2	PubH 2xx	Epi-Bio or SPHHS Electives	
Summer 2 <sup>nd</sup> year 3 credits	2	PubH 208	Management Approaches to Public Health	Tues/Thurs 3:45-6:00 pm
Fall 3 <sup>rd</sup> year 7 credits	1	PubH 261	Epidemiology & Biostatistics Skills Bldg Seminar	Tues 4:10-6:00 pm
	2	PubH 214	Practicum	Mon 4:10-7:00 pm
	3	PubH 260	Advanced Data Analysis	
	1	PubH 2xx	Epi-Bio or SPHHS Electives	
Spring 3 <sup>rd</sup> year 6 credits	2	PubH 215	Culminating Experience	
	2	PubH 2xx	Epidemiology Content Course	
	2	PubH 2xx	Epi-Bio or SPHHS Electives	

### Epidemiology Content Courses

PubH 242	Clinical Epidemiology	Spring Every Year	Tues 4:10-6:00 pm
PubH 244	Cancer Epidemiology	Spring Every Year	Wed 4:10-6:00 pm
PubH 245	Infectious Disease Epidemiology	Spring Every Year	Mon 4:00-6:00 pm
PubH 246	Injury Epidemiology	Fall Every Year	Tues 4:10-6:00 pm
PubH 248	Epidemiologic Methods in Older Populations	Fall Every Year	Mon 6:10-8:00 pm
PubH 250	Epidemiology of HIV/AIDS	Fall Every Year	Thurs 4:10-6:00 pm
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