

# EPIDEMIOLOGY (MS)

NYSE: 40722 HEGIS: 0419.00 CIP: 26.1309

## Program Description

The Master of Science in Epidemiology is a research-focused degree that prepares students to design and conduct epidemiologic studies as well as analyze, interpret, model, and report on data from public health, health care, biomedical, clinical and population-based studies.

## Focus Areas

There are four program focus areas that allow students to develop a specific area of content or methodological expertise:

- General Epidemiology
- Infectious Disease Epidemiology
- Noncommunicable Disease Epidemiology
- Modeling

Graduates from the program will be prepared to assume collaborative research team member roles in public health and healthcare settings around the globe with a skillset that has both breadth and depth. They can also pursue doctoral level studies in epidemiology, biostatistics, or other quantitative health fields. In addition, the MS in Epidemiology can serve as a terminal degree for those interested in working as a master's level project director/coordinator or statistician/data analyst in a wide array of research settings including government, academia, industry (e.g., pharmaceutical companies, contract research organization, healthcare consulting), non-governmental organizations, and nonprofit and community-based organizations.

## Admissions

All applicants are required to submit the following:

- SOPHAS application form, select a single area of concentration
- Official transcripts from each institution attended (or an evaluation of your credentials if you graduated from a foreign institution)
- Three letters of recommendation
- Personal statement
- Resume/CV
- English language proficiency exam (TOEFL iBT or IELTS Academic) results for all applicants whose native language is not English and who did not receive the equivalent of a US bachelor's degree at an institution where English is the primary language of instruction.
  - International students requiring a visa to attend NYU must complete the IELTS exam in person at an authorized test center. If you are required to take the exam but will not need it for visa purposes you may choose to take it online or at a test center.

## Program Requirements

Course	Title	Credits
<b>Required Courses</b>		
GPH-GU 2106	Epidemiology	3
GPH-GU 2450	Intermediate Epidemiology	3
GPH-GU 2930	Epidemiological Methods and Design	3
GPH-GU 2374	Evaluation of Epidemiological Studies	3
GPH-GU 2995	Biostatistics for Public Health	3

GPH-GU 2332	Applied Regression Analyses	3
GPH-GU 2152	Introduction to Agent-Based Modeling	3
GPH-GU 5170	Introduction to Public Health	0
<b>Focus Areas</b>		
Select one of the following Focus Areas:		21
General Epidemiology		
Infectious Disease Epidemiology		
Noncommunicable Disease Epidemiology		
Modeling		
<b>Culminating Experience</b>		
GPH-GU 2686	Thesis I: Practice and Integrative Learning Experiences	2
GPH-GU 2687	Thesis II: Practice and Integrative Learning Experiences	2
<b>Total Credits</b>		<b>46</b>

## Focus Area Requirements

### General Epidemiology

Course	Title	Credits
<b>Required Courses</b>		
GPH-GU 2324	Infectious Disease Epidemiology	3
GPH-GU 2230	Global Non-Communicable Disease Prev & Control	3
<b>Electives</b>		
Select five courses from the following:		15
GPH-GU 9325	Behavioral and Communication Strategies for Global Epidemics	
GPH-GU 2363	Causal Inference: Design and Analysis	
GPH-GU 2380	Data-Driven Decision Making in Global Public Health	
GPH-GU 2440	Emerging Diseases and Bioterrorism	
GPH-GU 2342	Global Issues in Public Health Nutrition	
GPH-GU 2140	Global Issues in Social & Behavioral Health	
GPH-GU 2480	Longitudinal Analysis of Public Health Data	
GPH-GU 2344	Maternal and Child Nutrition in Public Health	
GPH-GU 2275	Nutrition Epidemiology for Public Health	
GPH-GU 3275	Practical Applications in Epidemiology	
GPH-GU 2227	Psychiatric Epidemiology	
GPH-GU 9345	Public Health Emergency Preparedness and Response: A Global Perspective	
GPH-GU 2198	Simulations in Biostatistics	
GPH-GU 2255	Substance Use and Public Health	
GPH-GU 2137	Topics in Dynamic Modeling	
<b>Total Credits</b>		<b>21</b>

### Infectious Disease Epidemiology

Course	Title	Credits
<b>Required Courses</b>		
GPH-GU 2324	Infectious Disease Epidemiology	3
or GPH-GU 2274	Outbreak Epidemiology: Re-emerging and Emerging Infectious Diseases	
Select two of the following:		6
GPH-GU 2232	Detection and Control of Waterborne Pathogens	
GPH-GU 2440	Emerging Diseases and Bioterrorism	

GPH-GU 5120 HIV/AIDS from a Global Perspective			
<b>Electives</b>			
Select four courses from the following:	12		
GPH-GU 2368 Applied Survival Analysis			
GPH-GU 9325 Behavioral and Communication Strategies for Global Epidemics			
GPH-GU 2232 Detection and Control of Waterborne Pathogens			
GPH-GU 2440 Emerging Diseases and Bioterrorism			
GPH-GU 2140 Global Issues in Social & Behavioral Health			
GPH-GU 5120 HIV/AIDS from a Global Perspective			
GPH-GU 2480 Longitudinal Analysis of Public Health Data			
<b>Total Credits</b>	21		
GPH-GU 2995 Biostatistics for Public Health		3	
GPH-GU 2152 Introduction to Agent-Based Modeling		3	
Area Elective		3	
	<b>Credits</b>	12	
<b>2nd Semester/Term</b>			
GPH-GU 2450 Intermediate Epidemiology		3	
GPH-GU 2332 Applied Regression Analyses		3	
GPH-GU 5170 Introduction to Public Health		0	
Area Elective		3	
Area Elective		3	
	<b>Credits</b>	12	
<b>3rd Semester/Term</b>			
GPH-GU 2930 Epidemiological Methods and Design		3	
GPH-GU 2686 Thesis I: Practice and Integrative Learning Experience		3	

## Noncommunicable Disease Epidemiology

Course	Title	Credits	Credits	11
<b>Required Courses</b>				
GPH-GU 2230	Global Non-Communicable Disease Prev & Control	3	GPH-GU 2687	Thesis II: Practice and Integrative Learning Experiences
Select two of the following:		6	GPH-GU 2374	Evaluation of Epidemiological Studies
GPH-GU 2275	Nutrition Epidemiology for Public Health		Area Elective	
GPH-GU 2255	Substance Use and Public Health		Area Elective	
GPH-GU 2227	Psychiatric Epidemiology			
<b>Electives</b>				
Select four courses from the following:		12		
GPH-GU 2368	Applied Survival Analysis			
GPH-GU 2278	Global Cancer Epidemiology			
GPH-GU 2342	Global Issues in Public Health Nutrition			
GPH-GU 2140	Global Issues in Social & Behavioral Health			
GPH-GU 2480	Longitudinal Analysis of Public Health Data			
GPH-GU 2227	Psychiatric Epidemiology			
<b>Part-Time</b>				
Course	Title	Credits		
<b>1st Semester/Term</b>				
GPH-GU 2106	Epidemiology	3		
GPH-GU 2995	Biostatistics for Public Health	3		
<b>2nd Semester/Term</b>				
GPH-GU 2450	Intermediate Epidemiology	3		

## Modeling

## Sample Plan of Study

## Sample Full-Time

Full-Time		3rd Semester/Term	
Course	Title	Credits	Code
<b>1st Semester/Term</b>			
GPH-GU 2106	Epidemiology	3	GPH-GU 2687
			Thesis II: Practice and Integrative Learning Experiences
			2

Area Elective	3
Credits	5
Total Credits	46

## Learning Outcomes

Upon completion of the Epidemiology Master of Science degree, graduates will have the skills and competencies to:

1. Explain and provide examples of fundamental epidemiological concepts (e.g., prevalence, incidence, odds ratio, relative risk, attributable risk, direct and indirect standardization, standardized mortality ratio, cross-sectional, case-control, cohort, precision, bias, confounding, effect modification).
2. Critically evaluate the application of epidemiologic methods to answer public health questions.
3. Conduct quantitative analyses skills of epidemiologic data using statistical software.
4. Explain and provide examples of the application of epidemiologic methods to the study of the social determinants of health.
5. Synthesize the extant epidemiologic literature and identify its limitations and gaps.
6. Design robust observational and experimental studies to address public health and clinical problems.
7. Effectively communicate epidemiologic findings orally, visually, and in writing.
8. Understand and apply principles of ethical conduct to epidemiological studies.
9. Critically evaluate and apply dynamic models of epidemiologic phenomena using equation- and agent-based models.

## Policies

### NYU Policies

University-wide policies can be found on the New York University Policy pages (<https://bulletins.nyu.edu/nyu/policies/>).

### School of Global Public Health Policies

A list of related academic policies can be found on the School of Global Public Health academic policies page (<https://bulletins.nyu.edu/graduate/global-public-health/academic-policies/>).