

**NYU****COLLEGE OF GLOBAL  
PUBLIC HEALTH****UGPH-GU 30 Epidemiology for Global Health (Section 002)**

Class Schedule: Mondays & Wednesdays, 3:30-4:45pm

Class Location: 7 East 12<sup>th</sup> Street, Room 125

Semester and Year:

Professor: Andrea L Deierlein, PhD MPH MS

Email: ald8@nyu.edu

Office: 411 Lafayette Street, Room 524

Office Hours: By Appointment

**COURSE DESCRIPTION:**

Epidemiology is the study of the distribution and determinants of health and illness in human populations worldwide. The overall objective of this course is to introduce students to the history, principles, and methods of epidemiology in a global context. Students will also examine epidemiological theories, analytic approaches, and tools from a global health perspective. Finally, students will develop the necessary skills to critically read, interpret, and appraise published epidemiological studies and to locate, use, evaluate, and synthesize information from mass media sources.

**COURSE LEARNING OBJECTIVES:**

1. Understand the evolution and current role of epidemiology as an approach to assessing public health problems.
2. Describe epidemiological approaches to defining and measuring health problems in defined populations.
3. Understand how epidemiologic studies are designed, implemented and analyzed.
4. Understand the concepts of measurement of test performance and be able to apply these concepts of testing and screening in a range of health and other settings.
5. Understand and apply epidemiological criteria needed to establish cause and effect relationships.
6. Understand, and apply key ethical issues to the conduct of epidemiological and other scientific investigations.
7. Critically read and understand health information.

**PRE-REQUISITES:**

No pre-requisites.

**COURSE REQUIREMENTS AND EXPECTATIONS:**

This course consists of lectures and in-class case studies. Lectures introduce epidemiologic concepts and principles, while case studies (in-class and homework) enable the student to actively engage, analyze, and synthesize the material from lectures and apply principles to answering questions related to a health topic. This semester, the health topic is **asthma**.

Both lectures and case studies will be given by either the professor or a guest lecturer. Students are required to attend all lectures and exercises, irrespective of who is providing instruction. Attendance and participation are an important part of the final grade.

Guest lecturers will be presenting examples of applied epidemiology in the context of methodological principles. These lectures can take the form of an introduction to an epidemiologic field or a health condition. The purposes of these lectures are to reinforce the epidemiologic principle, provide relevant examples to place the concept in context, and/or introduce an area of public health epidemiology. Additional reading materials will be provided as necessary.

At the beginning of each class, students will present on a health topic of interest. This presentation (5 minutes) is designed to provide students with the opportunity to present an epidemiology/public health-related topic of their choice identified from a variety of media sources (New York Times, MSNBC, etc.). Each student is required to present once during the semester.

Students will work in teams of two to write up a research proposal that addresses a specific health concern – this semester, **bike safety**. The aim of this exercise is for students to use the concepts taught in lectures to address all aspects of an epidemiologic research question (e.g., defining the population of interest, choosing a data source). The research proposal project is divided into three assignments – the first two will be due during the semester (see the course outline below for due dates); the final assignment will include revised versions of the first two assignments (incorporating feedback from the instructor) and responses to a third assignment. The final proposal should include **four** sections: *Introduction, Methods, Analysis, and Discussion*, and must be written up in paragraph form. During the semester, class sessions will provide additional opportunities for teams to meet and discuss the assignments.

Students are *required* to do the following:

1. Attend and actively participate in all class sessions. If you cannot attend a certain session, it is your responsibility to email the instructor (with the course assistant cc'd) prior to the start of class, or in the case of an emergency, immediately upon return. All other absences will be considered unexcused and will impact the final grade.
2. Come to class on time to prevent disrupting the lecture and classroom activities. Chronic lateness will also impact your attendance grade.
3. Complete all assigned reading assignments prior to class.
4. Adhere to NYU's policy on plagiarism and academic integrity (below), will be strictly adhered to. Please take the time to read and thoroughly understand this it.
5. **Case Study Assignments/Homework (5):** In-class case study sessions will follow lectures on specific epidemiologic topics and aim to reinforce concepts presented during the previous class by having students work through questions related to a real-world example. After the in-class case study ends, students will be given questions to complete as homework. The discussion from the in-class case study can inform the answers to the homework. Due dates for the homework are noted below. The assignment must be uploaded to NYU Classes prior to the class when the homework is due. One point will be deducted for each 24 hour period following the due date and time the assignment is not uploaded.
6. **Research Proposal Assignments (3):** Students will work in groups of two to write up a research proposal that addresses a specific health problem over three assignments. Questions to address in each section will be posted on NYU Classes. Adhere to the page limits noted for assignment. Both students' names must be on each page of the assignment. The final proposal should not exceed 8 pages. The assignment (one per team) must be uploaded to NYU Classes prior to the class when the

proposal is due. One point will be deducted for each 24-hour period following the due date and time the assignment is not uploaded.

7. **Health Topic Presentation (1):** Each student will present on a public health/epidemiology topic of interest once during the semester. The presentation should be 5 minutes followed by 2-3 minutes of questions and should consist of the following components: (1) what is the issue, (2) why does it matter for public health and (3) what is the epidemiology involved. The presentation should consist of at least 1 slide as a reference to the source(s). Email the presentation to the professor prior to the start of class. If you use google drive, export into pptx, and email it to the professor. Students are expected to ask questions after each presentation and this count towards the participation grade.
8. **In-class Quizzes (2):** There will be 2 in-class quizzes during the semester. Students will be assessed on their mastery of course materials up to the class lecture prior to the quiz. No make-up quizzes will be allowed.

**NOTE:** All assignments **must** be typed (1" margins, Times New Roman 12pt or Arial 11pt font – no smaller and no larger – no exceptions!). Calculations may be neatly handwritten. Your name must be on the top of each page that you hand in.

**GRADING RUBRIC:**

Item:	Percentage or Points:
Attendance and Participation	10
Case Study Homework Assignments (6 x 5 pts)	30
Research Proposal Assignments	
Assignment 1	8
Assignment 2	12
Assignment 3/Final Proposal	15
Health Topic Presentation	5
In-class Quizzes (2 x 10 pts)	20
<b>Total</b>	<b>100</b>

**GRADING SCALE:**

A:	93-100	C+:	77-79
A-:	90-92	C:	73-76
B+:	87-89	C-:	70-72
B:	83-86	D+:	67-69
B-:	80-82	D:	60-66
		F:	<60

**NYU CLASSES:**

NYU Classes will be used extensively throughout the semester for assignments, announcements, and communication. NYU Classes is accessible through at <https://home.nyu.edu/academics>

**TECHNOLOGY POLICY:**

**Please do not bring any distracting electronic devices (laptops, iPods, cell phones, iPads, etc.) to class.** Please turn them off and put them away while in class. Use paper and a pen to record pertinent information. Using such devices will result in a loss of attendance and participation points.

**COURSE OUTLINE:**

Date	Topics	Readings/Materials Due	Assignments Due
Sept 7	Course Overview Introduction to Epidemiology		Sign-up Sheets for Health Topic Presentations
Sept 12	Descriptive Epidemiology: Person, Place, and Time	F&S: Chapter 4	
Sept 14	Case Study #1		
Sept 19	Outbreak Investigation	F&S: Chapter 12	Homework #1
Sept 21	Case Study # 2		
Sept 26	Measures of Disease Frequency	F&S: Chapter 3	Homework #2
Sept 28	Case Study #3		
Oct 3	Public Health Surveillance, Surveys, Sources of Data/ Review	F&S: Chapter 5	Homework #3
<b>Oct 5</b>	<b>Midterm Quiz</b>		
Oct 10	Fall Break		
Oct 12	Cross-sectional and Ecologic Studies	F&S: Chapter 6	Proposal Assignment #1
Oct 17	Causal Inference and Measures of Effect	F&S: Chapter 9	
Oct 19	Experimental Studies / RCT	F&S: Chapter 8	
Oct 24	Cohort Studies	F&S: Chapters 7, 10	
Oct 26	Case Study #4		
Oct 31	Case Control Studies	F&S: Chapter 6	Homework #4
Nov 2	Case Study #5		

Nov 7	Confounding	F&S: pp. 303-319 F&S: Chapter 10	Homework #5
Nov 9	Case Study #6		
Nov 14	Review/ Work on Research Proposal	F&S: Chapter 10	Homework #6
Nov 16	Study Design Review/Challenge		
Nov 21	<b><i>Final Quiz</i></b>		
Nov 28	Work on Research Proposal		
Nov 30	Public Health Career Panel/Guest Lecture		Proposal Assignment #2
Dec 5	Nutrition Epidemiology		
Dec 7	Guest Lecture – Psych Epi		
Dec 12	Screening	F&S: Chapter 11	
Dec 13	Work on Research Proposal		
Dec 14	Final Summary and Survey		Proposal Assignment #3

#### **READING/VIEWING LIST:**

We will primarily rely on the following textbook in this class:

Friis and Sellers: Epidemiology for Public Health Practice, 5<sup>th</sup> Edition

Additional reading assignments noted in the syllabus or that are required for homework assignments will be posted to NYU Classes.

#### **STATEMENT OF ACADEMIC INTEGRITY:**

The NYU College of Global Public Health values both open inquiry and academic integrity. Students in the program are expected to follow standards of excellence set forth by New York University. Such standards include respect, honesty and responsibility. The CGPH does not tolerate violations to academic integrity including:

- Plagiarism
- Cheating on an exam
- Submitting your own work toward requirements in more than one course without prior approval from the instructor
- Collaborating with other students for work expected to be completed individually
- Giving your work to another student to submit as his/her own
- Purchasing or using papers or work online or from a commercial firm and presenting it as your own work

Students are expected to familiarize themselves with the CGPH and University's policy on academic

integrity as they will be expected to adhere to such policies at all times – as a student and an alumni of New York University.

### Plagiarism

Plagiarism, whether intended or not, is not tolerated in the CGPH. Plagiarism involves presenting ideas and/or words without acknowledging the source and includes any of the following acts:

- Using a phrase, sentence, or passage from another writer's work without using quotation marks
- Paraphrasing a passage from another writer's work without attribution
- Presenting facts, ideas, or written text gathered or downloaded from the Internet as your own
- Submitting another student's work with your name on it
- Submitting your own work toward requirements in more than one course without prior approval from the instructor
- Purchasing a paper or "research" from a term paper mill.

Students in the CGPH and CGPH courses are responsible for understanding what constitutes plagiarism. Students are encouraged to discuss specific questions with faculty instructors and to utilize the many resources available at New York University.

### Disciplinary Sanctions

When a professor suspects cheating, plagiarism, and/or other forms of academic dishonesty, appropriate disciplinary action is as follows:

- The Professor will meet with the student to discuss, and present evidence for the particular violation, giving the student opportunity to refute or deny the charge(s).
- If the Professor confirms that violation(s), he/she, in consultation with the Program Director may take any of the following actions:
  - Allow the student to redo the assignment
  - Lower the grade for the work in question
  - Assign a grade of F for the work in question
  - Assign a grade of F for the course
  - Recommend dismissal

Once an action(s) is taken, the Professor will inform the Program Director and inform the student in writing, instructing the student to schedule an appointment with the Associate Dean for Academic Affairs, as a final step. The student has the right to appeal the action taken in accordance with the CGPH Student Complaint Procedure.

### **STUDENTS WITH DISABILITIES:**

Students with disabilities should contact the Moses Center for Students with Disabilities regarding the resources available to them, and to determine what classroom accommodations should be made available. More information about the Moses Center can be found here. must appear on the syllabus. Information about the center can be found here: <https://www.nyu.edu/life/safety-health-wellness/students-with-disabilities.html>. Students requesting accommodation must obtain a letter from the Moses Center to provide to me as early in the semester as possible.