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Course Title

Epidemiology for Global Health, Section G01

Course Number UGPH-GU 9030

Instruction Mode: Blended

Fall 2022

If you are enrolled in this course 100% remotely and are not a Go Local/Study Away student for NYU Accra, please make sure that you've completed the online academic orientation via Brightspace so you are aware of site-specific support structure, policies and procedures. Please contact Dr. Nicholas Okai (nno211@nyu.edu) and Ms. Sharon Agbemenya (sa158@nyu.edu) if you have trouble accessing the Brightspace site.

Syllabus last updated on: 22-08-2022

Lecturer Contact Information
● Dr. Adolphina Addo-Lartey
● Contact Phone No:
● Office hours: By Appointment
● Email.

Prerequisites
Not applicable

Units earned 4 credits

Course Details
● Thursdays, 09:30 am to 12:30 pm
● All times are GMT
● Location: Rooms will be posted in Albert before your first class.
● Remote Participants: Your instructor will provide you with the Zoom link via NYU Classes.
● COVID-related details: In the interest of protecting the NYU [SITE] community, we are closely following CDC guidance around COVID-19 and adjusting our recommendations and policies accordingly. Your health and well-being are our top priority.
    ○ If you are attending in person, you will be assigned a seat on the first day and are expected to use that seat for the entire semester due to NYU COVID-19

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safety protocol. Please note that you are expected to attend every class meeting in-person; however, this may change during the drop/add period if in-person student registration increases significantly or at any point during the semester if local COVID-19 regulations require additional physical distancing.
- ○ Additionally, in-person students will be split into cohorts who will attend sessions [AS INDICATED HERE].

Course Description

Epidemiology is the study of the distribution and determinants of health and illness in human populations and the application of this study to control health problems. The purpose of this course is to introduce students to the basic principles and methods of epidemiology in a global context and to demonstrate their applicability in the field of public health. Topics covered in this course include history, background, and different perspectives of epidemiology, measures of disease frequency; measures of association; epidemiologic study designs; public health surveillance; outbreak investigations; assessment of causality; and the relationship between epidemiology and public health policies. In addition, students will develop the necessary skills to critically read, interpret and assess health information from published epidemiological studies and mass media sources.

The course will comprise three major segments:
- The epidemiologic approach to disease and intervention
- Using epidemiology to identify the cause of disease
- Applying epidemiology to evaluation and policy

Course Objective

- Explain the role of epidemiology in public health. Understand the historical context and scope of epidemiology.
- Contrast the epidemiologic population-based approach with the clinical perspective. Provide the appropriate research question when presented with a public health problem that requires an epidemiologic investigation.
- Identify sources of health-related data to describe the distribution of disease in populations. Generate hypotheses from descriptive data on disease frequency in relation to person, place, and time. Interpret health status indices based on these data, for example, morbidity and mortality rates.
- Explain the critical differences between epidemiologic descriptive and analytic study designs, the measures that can be estimated from each, as well as the strengths and limitations of these designs. Describe how to select an appropriate study design for a specific research question or health problem.
- Analyze data using the appropriate epidemiologic techniques. Define, compute and interpret epidemiologic measures of prevalence, incidence, relative risk, attributable risk, mortality ratios.
- Identify practical issues in conducting epidemiological studies e.g., the various forms of potential bias in epidemiological data and their potential for occurrence in specific study situations. Discuss the implications of the study findings.
- Evaluate the evidence in favor of and against the likelihood that an observed association in epidemiological studies is causal using a set of criteria.

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- Communicate the role of epidemiology in public health surveillance. Present the purpose and problems of data interpretation in surveillance and outbreak investigations.
- Communicate epidemiological information to lay and professional audiences

Assessment Components

You are expected to attend class in person or remote synchronously. Failure to submit or fulfill any required component may result in failure of the class, regardless of grades achieved in other assignments.

Class Attendance and Participation

You are expected to attend class and participate in all class sessions. If you cannot attend a certain session, it is your responsibility to email the instructor prior to the start of the class, or in the case of an emergency, immediately upon return.

Assigned Readings

Readings will be assigned on a weekly basis and this is outlined in the schedule of classes. Students are expected to complete all assigned readings prior to each synchronous class. Students are also encouraged to read and explore any additional resources pertinent to each class and share them during the lectures.

Homework

Students are encouraged to work individually on homework assignments. Homework will be collected at the beginning of class on the day it is due and will be graded on a 100-point scale which will count towards your final grade. Solutions will be discussed in class. The least homework score will be dropped from your total homework grade.

Problem sets

Two practice problem sets will be distributed in class and will be due two weeks after distribution. Each problem set will emphasize important topics from lectures and assigned readings. Students are expected to work independently and should not discuss these assignments with others. Your grade in each of these problem sets will be dependent on your level of analysis and insightfulness. These will be graded on a 100-point scale. Solutions will be discussed in class**.**

Midterm exam

One midterm exam will be organized based on the material covered in the first half of the course and may include multiple-choice questions, computational, and short answer-type questions. The exam will be graded on a 100-point scale.

Media Project/Presentation

This project addresses how epidemiological findings are filtered through the media. What do media reports convey correctly and what is conveyed incorrectly? Students will be asked to choose a health-related statement from the popular press (e.g., from a newspaper, magazine, or on a cereal box, wine bottle, billboard, general websites, etc.) Students will then

find an epidemiologic journal article (e.g., medical or public health journal) that relates to this statement. In a brief, structured oral presentation, the student will compare the journal article's conclusions with those from the media report. Further instructions including the length of presentation time will be given in class. The presentation will be graded on a 100-point scale. The grade will be based two-thirds on content: collection and analysis of literature, critical thinking, and application of course concepts; and one-third on form clear organization, well prepared and delivered presentation. Students should submit their presentations to NYU Brightspace before the day of their presentation.

Final exams

The purpose of this exam is to pull together all the concepts conveyed in the second half of the course and may include multiple-choice questions, computational, and short answer-type questions. The exam will be graded on a 100-point scale. Additional guidelines will be handed out with the exam.

Grading of Assignment and Exams

Note: Unless otherwise specified, all written work must be submitted as a word document. All assignments must be typed (1" margins, Times New Roman or Arial, Font size 11 or 12). Your full name(s) must be on the top of each page. All in-class exercises must be completed during class time.

Assignments/Activities	% Of Final Grade
Attendance & Participation	10%
Homework	15%
Practice problem sets	15%
Midterm exam	20%
Media project	20%
Final exam	20%

Teaching & Learning Philosophy

I am a staunch advocate of the notion that everyone learns in their own unique way. This conviction prompts me to recognize the various learner types who enroll in my classes year after year and semester after semester. There are times when the difference is obvious, such when there are students in the class who have obvious difficulties. Other times, the distinction is subtle and requires more complex layers of interaction to understand. In each scenario, I employ a variety of techniques, pertinent and relevant examples, learning resources, and tools to effectively target the various learner groups. Anyone who needs a specific provision for the course materials, how the course is delivered, or for any other reason should contact me in person or by email (preferably within the first 2 weeks of class).

Required Text(s)
Electronic Resources (via Brightspace / NYU Library Course Reserves)
Epidemiology: with STUDENT CONSULT Online Access, 5e (Gordis, Epidemiology)
Author: Leon Gordis, MD, MPH, DrPH
Publisher: Saunders; 5th edition (December 9, 2013)
ISBN-13: 978-1455737338
ISBN-10: 145573733X

Supplemental Text(s) (not required to purchase)
Basic Epidemiology, 2nd Edition.
Authors: Bonita, Ruth, Beaglehole, Robert, Kjellström, Tord & World Health Organization. (2006).
World Health Organization. https://apps.who.int/iris/handle/10665/43541

Additional Required Equipment
Not applicable

Session 1 - [01 Sept 2022]
Topic: Introduction & History of epidemiology
Reading:
- Gordis, Chap. 1
- Bonita et al, Chap 1
- John Snow website (www. ph.ucla.edu/epi/snow.html)
- Epi Monitor (www.epimonitor.net)
Assignment due: None

Session 2 [08 Sept 2022]
Topic: Natural History, Spectrum & Concept of disease
occurrence **Reading**:
- Gordis, Chap. 6,
-Bonita et al, Chap. 5,7
Assignment due: None

Session 3 [15 Sept 2022]
Topic: The dynamics of disease transmission &
Epidemics **Reading:**
- Gordis, Chap. 2, 3
- Bonita et al, Chap. 5,7
Assignment due: Homework 1 (Disease occurrence)

Session 4 [22 Sept 2022]
Topic: Measures of disease
frequency **Reading**:
- Gordis, Chap. 6,
-Bonita et al, Chap. 7

Topic: Measures of Health and Disease (morbidity and mortality)

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Reading:
- Gordis, Chap. 3 & 4
- Bonita et al, Chap. 2
- "Your disease risk" (www. yourdiseaserisk.com)
Assignment due: Homework 2 (Epidemics)

Session 5 [29 Sept 2022]
Topic: Introduction to disease surveillance, Disease Prevention & Screening **Reading**:
- Gordis, Chap. 3, 18
-Bonita et al, Chap. 6
Assignment due: Homework 3 (Disease Frequency)

Session 6 - [06 Oct
2022] **Topic**: Sampling
Reading:
- Gordis, Chap. 7, 8
-Bonita et al, Chap. 3

Topic: Randomized trials & Cohort studies
Reading:
- Gordis, Chap. 7, 9,10,13, 20
-Bonita et al, Chap. 3
Assignment due: None
Problem set #1- distributed

Session 7 [13 Oct 2022]
Topic: Case-control Studies & Cross-sectional
Studies **Reading**:
- Gordis, Chap. 9,10 & 13, 20
- Bonita et al, Chap. 3
Assignment due: Homework 4 (Study designs)

Session 8 [20 Oct 2022]
Topic: Estimating Measures of Association & Attributable
Risk **Reading**:
- Gordis, Chap. 11, 12
-Bonita et al, Chap. 4
Assignment due: *Problem set #1*

Session 9 [27 Oct 2022]
Assignment due: Homework 5 **(**Measures of association and attributable
risk) ***Review session (Covers material up to session 8)**

Session 10 [03 Nov 2022]
Midterm exams (Covers material up to session 8)

Session 11 [10 Nov 2022]
Topic: Confounding & Age-Adjustment
Reading:
- Gordis, Chap. 5, 12, 15
- Bonita et al, Chap. 3
Assignment due: None

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Problem set #2- distributed

Session 12 [17 Nov 2022] **Topic**:
Validity & Literature Critique
Reading:
- Gordis, Chap. 14, 15
- Bonita et al, Chap. 5
Assignment due: Homework 6 (Age adjustment)
Media Project guidelines distributed

[24 Nov 2022] - PUBLIC HOLIDAY
No Classes – NYU New York Holiday
<mark>**Session 13** [**Friday, November 25: Make Up Day; Classes meet according to Thursday Class** Schedule]</mark>

Topic: Causation in epidemiological study designs
Reading:
- Gordis, Chap. 14, 15
- Bonita et al, Chap. 5
Assignment due: *Problem set #2*
Assignment due: *2 Media project topic + 2 supporting articles shared with instructor via email*

Session 14 [01 Dec 2022]
Media project presentations
Review session (Covers material from session 11- 13)
Take home [final] exam distributed

[08 Dec 2022] – Reading day
No Classes – NYU New York Holiday
Take home [final] exam due on Friday Dec 09, 2022 @ 1pm GMT

*[Please note that Exam Week is only for in-class exams, oral exams or essay submission, but not a regular session requiring student preparation and participation. Students' exam schedules may differ from their regular class schedule]

Classroom Etiquette
To optimize the experience in a blended learning environment, please consider the following:
- Please be mindful of your microphone and video display during synchronous class meetings. Ambient noise and some visual images may disrupt class time for you and your peers.
- Please do not eat during class and minimize any other distracting noises (e.g., rustling of papers and leaving the classroom before the break, unless absolutely necessary).
- If you are not using your cell phone to follow the lesson, cell phones should be turned off or in silent mode during class time.
- Make sure to let your classmates finish speaking before you do.

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- If deemed necessary by the study away site (i.e. COVID related need), synchronous class sessions may be recorded and archived for other students to view. This will be announced at the beginning of class time.
- Students should be respectful and courteous at all times to all participants in class.

Suggested Co-Curricular Activities

Watch epidemiological movies [made available by course instructor]

Purpose -Entertainment, relaxation, further application and/or ascertainment of concepts learned in class.

Your Lecturer

Dr. Adolphina Addo-Lartey has a BSc (Honors) in Biochemistry and Nutrition from the University of Ghana, an MS in Human Nutrition from Iowa State University (USA), and a Ph.D. in Public Health from the University of Massachusetts, Amherst, USA. Women's health epidemiology studies are the main subject of her research. She has conducted in-depth research on gender and health issues in Ghana as well as nutrition, reproductive health outcomes, chronic disease risk, maternal and child health, healthcare accessibility, and the social support component of healthcare delivery. She has experience conducting research, designing research, managing data, and performing statistical analysis for epidemiological studies. Dr. Addo-Lartey teaches undergraduate and graduate programs in the Department of Epidemiology and Disease Control at the University of Ghana's School of Public Health. Her courses include "Public Health Research Methods, Advanced Epidemiology. Basic Statistics, and Design/Analysis of Epidemiological studies. Dr. Addo-Lartey is also an adjunct faculty at the NYU College of Global Public Health and NYU Accra where she teaches "Assessment of Community Health Needs and Resources," "Intermediate Epidemiology," and "Epidemiology for Global Health".

Academic Policies

Grade Conversion

Your lecturer may use one of the following scales of numerical equivalents to letter grades:

A = 94-100 or 4.0
A- = 90-93 or 3.7
B+ = 87-89 or 3.3
B = 84-86 or 3.0
B- = 80-83 or 2.7
C+ = 77-79 or 2.3
C = 74-76 or 2.0
C- = 70-73 or 1.7
D+ = 67-69 or 1.3
D = 65-66 or 1.0
F = below 65 or 0

Attendance Policy

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Studying at Global Academic Centers is an academically intensive and immersive experience, in which students from a wide range of backgrounds exchange ideas in discussion-based seminars. Learning in such an environment depends on the active participation of all students. And since classes typically meet once or twice a week, even a single absence can cause a student to miss a significant portion of a course. To ensure the integrity of this academic experience, class attendance at the centers, or online through NYU Brightspace if the course is remote synchronous/blended, is expected promptly when class begins. Attendance will be checked at each class meeting. If you have scheduled a remote course immediately preceding/following an in-person class, you may want to write to NYU Accra to see if you can take your remote class at the Academic Center.

As soon as it becomes clear that you cannot attend a class, you must inform your professor and/or the Academics team by e-mail immediately (i.e., before the start of your class). Absences are only excused if they are due to illness, Moses Center accommodations, religious observance or emergencies. Your professor or site staff may ask you to present a doctor's note or an exceptional permission from an NYU Staff member as proof. Emergencies or other exceptional circumstances that you wish to be treated confidentially must be presented to staff. Doctor's notes must be submitted in person or by e-mail to the Academics team, who will inform your professors.

Unexcused absences may be penalized with a two percent deduction from the student's final course grade for every week's worth of classes missed, and may negatively affect your class participation grade. Four unexcused absences in one course may lead to a Fail in that course. Being more than 15 minutes late counts as an unexcused absence. Furthermore, your professor is entitled to deduct points for frequently joining the class late.

Exams, tests and quizzes, deadlines, and oral presentations that are missed due to illness always require a doctor's note as documentation. It is the student's responsibility to produce this doctor's note and submit it to site staff; until this doctor's note is produced the missed assessment is graded with an F and no make-up assessment is scheduled. In content classes, an F in one assignment may lead to failure of the entire class.

Regardless of whether an absence is excused or not, it is the student's responsibility to catch up with the work that was missed.

Final exams
Final exams must be taken at their designated times. Should there be a conflict between your final exams, please bring this to the attention of the Academics team. Final exams may not be taken early, and students should not plan to leave the site before the end of the finals period.

Late Submission of Work
(1) Work submitted late receives a penalty of 2 points on the 100-point scale for each day it is late (including weekends and public holidays), unless an extension has been approved (with a doctor's note or by approval of NYU SITE Staff), in which case the 2 points per day deductions start counting from the day the extended deadline has passed.

(2) Without an approved extension, written work submitted more than 5 days (including weekends and public holidays) following the submission date receives an F.

(3) Assignments due during finals week that are submitted more than 3 days late (including weekends and public holidays) without previously arranged extensions will not be accepted and will receive a zero. Any exceptions or extensions for work during finals week must be discussed with the NYU Accra Site Director.

(4) Students who are late for a written exam have no automatic right to take extra time or to write the exam on another day.

(5) Please remember that university computers do not keep your essays - you must save them elsewhere. Having lost parts of your essay on the university computer is no excuse for a late submission.

Academic Honesty/Plagiarism

As the University's policy on "Academic Integrity for Students at NYU" states: "At NYU, a commitment to excellence, fairness, honesty, and respect within and outside the classroom is essential to maintaining the integrity of our community. By accepting membership in this community, students take responsibility for demonstrating these values in their own conduct and for recognizing and supporting these values in others." Students at Global Academic Centers must follow the University and school policies.

NYU takes plagiarism very seriously; penalties follow and may exceed those set out by your home school. Your lecturer may ask you to sign a declaration of authorship form, and may check your assignments by using TurnItIn or another software designed to detect offences against academic integrity.

The presentation of another person's words, ideas, judgment, images, or data as though they were your own, whether intentionally or unintentionally, constitutes an act of plagiarism. It is also an offense to submit work for assignments from two different courses that is substantially the same (be it oral presentations or written work). If there is an overlap of the subject of your assignment with one that you produced for another course (either in the current or any previous semester), you MUST inform your professor.

For guidelines on academic honesty, clarification of the definition of plagiarism, examples of procedures and sanctions, and resources to support proper citation, please see:

NYU Academic Integrity Policies and Guidelines

NYU Library Guides

Inclusivity Policies and Priorities

NYU's Office of Global Programs and NYU's global sites are committed to equity, diversity, and inclusion. In order to nurture a more inclusive global university, NYU affirms the value of sharing differing perspectives and encourages open dialogue through a variety of pedagogical approaches. Our goal is to make all students feel included and welcome in all aspects of academic life, including our syllabi, classrooms, and educational activities/spaces.

Attendance Rules on Religious Holidays

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Members of any religious group may, without penalty, excuse themselves from classes when required in compliance with their religious obligations. Students who anticipate being absent due to religious observance should notify their lecturer AND NYU SITE's Academics Office in writing via e-mail one week in advance. If examinations or assignment deadlines are scheduled on the day the student will be absent, the Academics Office will schedule a make-up examination or extend the deadline for assignments. Please note that an absence is only excused for the holiday but not for any days of travel that may come before and/or after the holiday. See also University Calendar Policy on Religious Holidays

Pronouns and Name Pronunciation (Albert and Zoom)

Students, staff, and faculty have the opportunity to add their pronouns, as well as the pronunciation of their names, into Albert. Students can have this information displayed to faculty, advisors, and administrators in Albert, NYU Classes, the NYU Home internal directory, as well as other NYU systems. Students can also opt out of having their pronouns viewed by their instructors, in case they feel more comfortable sharing their pronouns outside of the classroom. For more information on how to change this information for your Albert account, please see the Pronouns and Name Pronunciation website.

Students, staff, and faculty are also encouraged, though not required, to list their pronouns, and update their names in the name display for Zoom. For more information on how to make this change, please see the Personalizing Zoom Display Names website.

Moses Accommodations Statement

Academic accommodations are available for students with documented and registered disabilities. Please contact the Moses Center for Student Accessibility (+1 212-998-4980 or mosescsd@nyu.edu) for further information. Students who are requesting academic accommodations are advised to reach out to the Moses Center as early as possible in the semester for assistance. Accommodations for this course are managed through the course administrator.

Bias Response

The New York University Bias Response Line provides a mechanism through which members of our community can share or report experiences and concerns of bias, discrimination, or harassing behavior that may occur within our community.

Experienced administrators in the Office of Equal Opportunity (OEO) receive and assess reports, and then help facilitate responses, which may include referral to another University school or unit, or investigation if warranted according to the University's existing Non-Discrimination and Anti-Harassment Policy.

The Bias Response Line is designed to enable the University to provide an open forum that helps to ensure that our community is equitable and inclusive.

To report an incident, you may do so in one of three ways:
- Online using the Web Form (link)
- Email: bias.response@nyu.edu
- Phone: 212-998-2277
- 030 276 1528

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