

NYU Steinhardt

Steinhardt School of Culture, Education, and Human Development

Department of Nutrition, Food Studies, and Public Health
E33.2306 / U10.2106: Introduction to Epidemiology
SPRING 2008

Course Information

Instructor: Nancy Mervish Ph.D.
Office Hours: By Appointment
Email: nam8@nyu.edu

Class Info: **Class Info:**
Lecture - Wednesday, 6:45 – 8:20pm
Lab - Wednesday, 8:45 – 10:00pm
Room - **Silver 714 (for both lecture and lab)**

Course TAs: Rachel Klein, MPH
Office hours: TBA
Email: rik208@nyu.edu

Jennifer Uyei, MPH
Office Hours: TBA
Email: jsu205@nyu.edu

COURSE DESCRIPTION

Epidemiology is the study of the distribution and determinants of health and disease in different human populations and the application of methods to improve disease outcomes. As such, epidemiology is the basic science of public health. This course is designed to introduce students in all fields of public to the background, basic principles and methods of public health epidemiology.

Topics covered include: measures of disease frequency; epidemiologic study designs, both experimental and non-experimental; understanding bias; and measures of effect and association. In addition, students will develop skills to read, interpret and evaluate health information from published epidemiological studies and mass media sources.

LEARNING OBJECTIVES

By the end of this course students will develop the ability to:

1. Explain the role of epidemiology in the broad field of public health.
2. List and describe epidemiological approaches to defining and measuring health problems in defined populations.
3. Understand the concepts of screening and testing in a range of health and other settings.

4. Understand the various epidemiologic study designs and be able to compare the strengths and weaknesses of each.
5. Identify and describe various sources of bias and confounding in epidemiologic studies
6. Understand and apply epidemiological criteria needed to establish cause and effect relationships
7. Understand, and apply key ethical issues to the conduct of epidemiological and other scientific investigations.
8. Critically read and evaluate epidemiologic studies in the medical or public health literature.

FORMAT

This course has two main components: a lecture and a discussion section; attending both lecture and discussion sections are equally important to ensuring success in the course. As such, each student is required to attend lecture sessions and participate in their discussion sections. The discussion sections will be led by a graduate teaching assistant (TA) and will include a discussion of lecture materials covered that week and a review of homework assignments due that week. For some discussion sections, students will have an opportunity to take part in a series of 'hands on' exercises developed to provide a fuller understanding of concepts covered in previous lectures and homework assignments.

READINGS

Required:

We will use the following textbook in this class:

1. Gordis L. Epidemiology, 3rd Edition (2004).
2. Additional readings may/will be assigned to supplement the main textbook or as part of various homework assignments; a list of these is provided on the next page and will be made available to students via the class blackboard.

Additional readings - will be made available via blackboard

Additional texts

1. A good online text: Principles of Epidemiology: An Introduction to Applied Epidemiology and Biostatistics. Second Edition. It is available at:
http://www.phppo.cdc.gov/PHTN/catalog/pdf-file/Epi_Course.pdf
2. Epidemiology, the Internet and Global Health.
 - This is an online compilation of hundreds of lectures on a wide variety of topics put together by Dr. Ronald LaPorte and colleagues at the University of Pittsburgh. Some of these lectures may be too advanced, but I would recommend this site to anyone interested in further reading on a specific subject area. The site can be accessed at <http://www.pitt.edu/~super1/>

REQUIREMENTS

1. Students are expected to attend all lecture and discussion sessions. Active participation in the discussion sessions is also expected and highly encouraged. If you can not attend a certain discussion session, it is your responsibility to notify the appropriate TA beforehand, or in the case of an emergency, immediately upon return. All other absences will be considered unexcused. In addition, students are expected to come to class on time to prevent disrupting the lecture and classroom activities.
2. Complete reading assignments prior to class.
3. **Complete homework assignments (8):** Homework assignments are due on the dates noted on the course schedule. They are to be handed in at the beginning of class – **late homework will not be accepted**. If you cannot make it to class, it is your responsibility to notify the appropriate TA ahead of time and make arrangements to turn in your homework via email, **no later than 8:15pm** the night of the lab (Wednesday). You can rely on your class notes or other supplemental materials to complete your assignment, but it is an individual effort so do not share answers with others! When tallying the final homework grade, we will drop the homework with the highest and lowest score. If you choose not to hand in a homework that will be considered a zero, however it can be dropped if it is your lowest.
4. **Midterm Exam:** A multiple choice exam covering materials presented in lectures 1 – 6.
5. **Final Exam:** A multiple choice exam covering materials presented in lectures 7 - 13.

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:

- | | |
|--------------------------------|--------|
| 1. Homework assignments (8x5): | 40 pts |
| 2. Midterm: | 30 pts |
| 3. Final: | 30 pts |

Course Schedule/assignments and readings:

	Date	TOPICS	Text Reading	Assignment Due
1	Jan. 23 th	- Overview of course objectives - Introduction to epidemiology	Ch. 1	--
2	Jan. 30 th	- Natural history of disease and levels of prevention - Intro to infectious disease Epi	Ch. 2 and readings: Morse, Nelson	Lab #2
3	Feb. 6 th	- Disease measures 1: Morbidity	Ch. 3	Lab #3 Outbreak investigation assignment due
4	Feb. 13 th	- Disease measures 2: Mortality Rates and adjustment	Ch. 4	Lab #4 Incidence/Prevalence assignment due
5	Feb.20 th	- Screening and diagnostic tests	Ch. 5 & 18	Lab #5 Morbidity, Mortality & Age-Adjustment assignment due
6	Feb 27 th	- Study Design 1: Randomized Trials	Ch. 7 & 8	Lab #6 Screening assignment due
7	March 5th	- Study Design 2: Cohort Studies	Ch. 9 Ch. 11, pp. 177 – 182 Ch. 12	Lab #7 RCT assignment due
	Mar. 12 th	MIDTERM EXAM		
	Mar. 19 th	Spring Break – No Class		
8	March 26	- Study Design 3: Case-Control	Ch. 10 (skip p.173-4) Ch. 11, pp. 182 – 188 Ch. 13	Lab #8 Cohort study assignment due
9	April 2	- Study Design 4: Cross-Sectional and Ecologic Studies	Ch. 10 173-4 Ch. 14, pp. 204 – 206	Lab #9 Case-Control study assignment due
10	Apr. 9 th	- Bias & Confounding	Ch. 15, pp. 224 – 232	Lab #10 Ecologic study assignment due
11	Apr. 16 th	- (Confounding cont') and Interaction	Ch. 15, pp. 233 – 238	Lab #11 Bias & Confounding assignment due
12	Apr. 23 th	- Causal Inference	Ch. 14 206-222	Interaction assignment due
13	April 30	- Ethical Considerations	Ch. 20	Review
	TBA	FINAL EXAM		

NYU Steinhardt

Steinhardt School of Culture, Education, and Human Development

STATEMENT ON ACADEMIC INTEGRITY* ***“Your degree should represent genuine learning”***

The relationship between students and faculty is the keystone of the educational experience in The Steinhardt School of Education at New York University. This relationship takes an honor code for granted. Mutual trust, respect and responsibility are foundational requirements. Thus, how you learn is as important as what you learn. A University education aims not only to produce high quality scholars, but also to cultivate honorable citizens.

Academic integrity is the guiding principle for all that you do, from taking exams, making oral presentations to writing term papers. It requires that you recognize and acknowledge information derived from others, and take credit only for ideas and work that are yours.

You violate the principle of academic integrity when you:

- *Cheat on an exam;*
- *Submit the same work for two different courses without prior permission from your professors;*
- *Receive help on a take-home examination that calls for independent work;*
- *Plagiarize*

Plagiarism, one of the gravest forms of academic dishonesty in university life, whether intended or not, is academic fraud. In a community of scholars, whose members are teaching, learning and discovering knowledge, plagiarism cannot be tolerated.

Plagiarism is failure to properly assign authorship to a paper, a document, an oral presentation, a musical score and/or other materials which are not your original work. You plagiarize when, without proper attribution, you do any of the following:

- *Copy verbatim from a book, an article or other media;*
- *Download documents from the Internet;*
- *Purchase documents;*
- *Report from other's oral work;*
- *Paraphrase or restate someone else's facts, analysis and/or conclusions;*
- *Copy directly from a classmate or allow a classmate to copy from you.*

Your professors are responsible for helping you to understand other people's ideas, to use resources and conscientiously acknowledge them, and to develop and clarify your own thinking. You should know what constitutes good and honest scholarship, style guide preferences, and formats for assignments for each of your courses. Consult your professors for help with problems related to fulfilling course assignments, including questions related to attribution of sources.

Through reading, writing and discussion, you will undoubtedly acquire ideas from others, and exchange ideas and opinions with others, including your classmates and professors. You will be expected, and often required, to build your own work on that of other people. In so doing,

you are expected to credit those sources that have contributed to the development of your ideas.

Avoiding Academic Dishonesty

- Organize your time appropriately to avoid undue pressure, and acquire good study habits, including note taking.
- Learn proper forms of citation. Always check with your professors of record for their preferred style guides. Directly copied material must always be in quotes; paraphrased material must be acknowledged; even ideas and organization derived from your own previous work or another's work need to be acknowledged.
- Always proofread your finished work to be sure that quotation marks or footnotes or other references were not inadvertently omitted. Know the source of each citation.
- Do not submit the same work for more than one class without first obtaining the permission of both professors even if you believe that work you have already completed satisfies the requirements of another assignment.
- Save your notes and drafts of your papers as evidence of your original work.

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 and Department Chair 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 Department Chair, and inform the student in writing, instructing the student to schedule an appointment with the Associate Dean for Student Services and Public Affairs, as a final step. Copies of the letter will be sent to the Department Chair for his/her confidential student file and the Associate Dean for Student Services and Public Affairs. The student has the right to appeal the action taken in accordance with the School's Student Complaint Procedure as outlined in *The Steinhardt School of Education Student Handbook*.

When dismissal is recommended, that recommendation will be forwarded to the Associate Dean for Student Services and Public Affairs, who will convene all parties involved. An appeal of the decision at this step is submitted in writing to the Vice Dean, including full documentation to support the appeal.

*The Steinhardt School of Education Statement on Academic Integrity is consistent with New York University Policy on Student Conduct, published in the NYU Student Guide.