

## **HNSC 7120X Fundamentals of Epidemiology**

**Semester:** SPRING 2021  
**Section:** NET (14918) (3 Credits)  
**Class time:** ONLINE ASYNCHRONOUS  
**Class location:** ONLINE  
**Instructor:** Jerry Mirotznik, PhD, MPH  
**Office location:** ONLINE  
**Office hour:** Tuesday and Thursday 5:00-6:00 p.m. via Blackboard Collaborate Ultra  
Other hours by appointment  
**Contact email:** JerryM@brooklyn.cuny.edu  
**Office phone:** 718-951-5000, Extension 2737

**Course Description:** Apply principles and methods of epidemiological analysis. Identify and interpret epidemiological data. Illustrate and investigate incidence, distribution, determinants, and control of disease.

**Pre-requisites:** None

### **COURSE OBJECTIVES**

- Introduce epidemiologic concepts, terms and basic numeric measures
- Examine the rationale for study designs with calculation and interpretation of measures of association
- Access existing information and data related to health
- Analyze relationships among behavioral, environmental, and other factors that influence health
- Analyze data
- Obtain and disseminate health-related information

### **LEARNING OUTCOMES**

**By the end of this course students will be able to:**

1. Apply scientific knowledge to assess critically health data/information and indicators of health status at individual, societal, and structural levels.
2. Demonstrate analytical and communication skills for diverse audiences.
3. Demonstrate knowledge of scientific research and evidence-based practice for use in the field.
4. Demonstrate the importance of professional behavior, ethics and human rights.

### **REQUIRED READINGS**

Textbook: Textbook: Gordis, L. (2014). *Epidemiology* (Fifth Edition). Philadelphia, PA: Elsevier Saunders Company

Articles: All required readings can be accessed as a pdf within each week's module in Blackboard.

## **ASSIGNMENTS AND EVALUATION**

### **Grading \*,\*\***

<b>Numeric Score</b>	<b>Letter Grade</b>
<b>97 - 100</b>	<b>A+</b>
<b>92 - 96</b>	<b>A</b>
<b>90 - 91</b>	<b>A-</b>
<b>87 - 89</b>	<b>B+</b>
<b>82 - 86</b>	<b>B</b>
<b>80 - 81</b>	<b>B-</b>
<b>77 - 79</b>	<b>C+</b>
<b>70 - 76</b>	<b>C</b>
<b>≤69</b>	<b>F</b>

\* Please note on the graduate level any grade less than a “C” is considered failing.

\*\* Typically final grades for this course have not been based on a curve. However, I am open to curving the grades if it is warranted.

## **COURSE EVALUATION/FINAL GRADE**

Your final course grade will be comprised of the following components:

<b>Components</b>	<b>Weights</b>
Quizzes	15%
Midterm Exam	30%
Final Exam	30%
Assignments/Exercises	20%
Class Participation	5%
Total	100%

## **GRADE COMPONENT DETAILS**

### **Tests**

There will be several quizzes, a midterm and a final exam. Typically exams include short answer questions (i.e., true/false and multiple choice), lists/explanations, data analysis/interpretation questions. The final exam will not be cumulative.

### **Assignments**

There will also several homework assignments. These assignments will be based on the class lectures and the readings, and they will provide you with an opportunity to apply and thereby enhance your understanding of the course material. Any assignment submitted after its due date will be penalized 5 points for each day late. No assignment will be accepted more than one week after its due date.

### **Posts**

Throughout the semester there will be a number of Discussion Board posts. And class participation scores will be based in part on these posts and also your engagement with the instructor, as indicated by the questions you raise with me and your responses to questions I might ask of the class.

## COURSE FORMAT INFORMATION

Time and Location	This course is scheduled this semester as an online, asynchronous course. This means that the course materials/assignments will be posted online and that you will be able to review and engage with these materials/assignments at your own time and convenience. Scheduling the class asynchronously capitalizes on some of the great advantages of online learning, namely, its flexibility and accessibility. Building on this hopefully will enhance your success in the course.
Course website	Students log into the course website through their Blackboard portal: <a href="https://bbhosted.cuny.edu">https://bbhosted.cuny.edu</a>
Contact with Instructor	I will be available online through the virtual office hours, and by appointment. To drop in during my virtual office hours, please click on the "Blackboard Collaborate Ultra" tab in the Course Menu on the left hand side of our Blackboard course site. Then click on "Course Room" and then "Join Course Room". As an alternative, please feel free to email me. We'll then schedule a time to meet.
Technology requirements	Lecture will be presented in PowerPoint Slide Version 15.0.5249.1001.
Support Resources	For technical assistance with school computers or connecting to the internet, please contact Brooklyn ITS Helpdesk at 718-951- 4357 or via email at <a href="mailto:helpdesk@brooklyn.cuny.edu">helpdesk@brooklyn.cuny.edu</a>
This course will require each student to	<ul style="list-style-type: none"> <li>• Review all of the course material for a particular week</li> <li>• Complete weekly assignments</li> <li>• Adhere to deadlines</li> <li>• Spend approximately 10 hours per week doing work for this course</li> </ul>
Weekly Modules	The course is organized into weekly modules. To access the material for the week click on the tab in the Course Menu labelled "Weekly Modules," then click on the relevant folder, e.g., Week 1, Week 2, etc. Please note that the new week's material will be made available by 5pm on Thursday of that week.
Course material	The week's lecture will be presented via a <i>narrated PowerPoint slideshow presentation</i> . To access the audio you must view the presentation using the "slideshow" utility.
	Typically, a <i>chapter from the textbook</i> will also be assigned for the week's module.
	A number of weeks of the semester will also require you to review <i>selected published articles</i> .
Assignments/ Assessments	Over the course of the semester you'll be asked to submit a number of different assignments. During selected weeks you will also be asked to post an original <i>comment in the Discussion Board</i> and/or respond to one your classmates' comments. In addition, there will be throughout the semester a number of short quizzes, as well as a midterm, final exam, and a term paper.

## COURSE POLICIES

Make-up exams	Early exams or make-up exams will be given only for extraordinary reasons that can be fully documented.
Late Submissions	No assignments will be accepted after the deadline without clear and valid documentation of an emergency situation. At the discretion of the instructor, any assignment that is handed in late, <b>without prior agreement from the Instructor</b> , will result in an automatic deduction of five points per day up to one week. No assignment more than seven days late will be accepted <b>without prior agreement from the Instructor</b> . When you submit an assignment online, make sure that you save documentation of the date the document was sent. This will be your proof in case the document is not received.
Revision of Assignments	All submitted assignments are final, unless clear and valid documentation of an emergency is submitted.

## **COLLEGE POLICIES**

### **Online Etiquette and Anti-harassment Policy**

Civility will be expected of all students, as well as from the instructor. Inappropriate behavior online is disruptive and compromises the learning environment. Further, the University strictly prohibits the use of University online resources or facilities, including Blackboard, for the purpose of harassment of any individual or for the posting of any material that is scandalous, libelous, offensive or otherwise against the University's policies. Please see: "Netiquette in an Online Academic Setting: A Guide for CUNY School of Professional Studies Students" at <http://catalog.sps.cuny.edu/content.php?catoid=2&navoid=205>

### **Academic Integrity**

The faculty and administration of Brooklyn College support an environment free from cheating and plagiarism. Each student is responsible for being aware of what constitutes cheating and plagiarism and for avoiding both. The complete text of the CUNY Academic Integrity Policy and the Brooklyn College procedure for implementing that policy can be found at this site: <http://www.brooklyn.cuny.edu/bc/policies>. If a faculty member suspects a violation of academic integrity and, upon investigation, confirms that violation, or if the student admits the violation, the faculty member **MUST** report the violation. **NO EXCEPTIONS!** Any violation of the following will result in a grade of 0 for the assignment or activity.

### **Types of Academic Dishonesty Explicitly Prohibited**

- **Cheating** is the unauthorized use or attempted use of material, information, notes, study aides, devices or communication during an academic exercise.
- **Plagiarism** is the act of presenting another person's ideas, research or writings as your own.
- **Internet plagiarism** includes submitting downloaded term papers or parts of term papers, paraphrasing or copying information from the internet without citing the source, and "cutting & pasting" from various sources without proper attribution.
- **Obtaining unfair advantage** is any activity that intentionally or unintentionally gives a student an unfair advantage in his/her academic work over another student. This includes sharing specific information about exam questions with other students.
- **Falsification of records and official documents** includes, but is not limited to, forging signatures of authorization and falsifying information on an official academic record.

### **Center for Student Disability Services**

The Center for Student Disability Services (CSDS) will be working remotely for the spring semester. In order to receive disability-related academic accommodations students must first be registered with CSDS. Students who have a documented disability or suspect they may have a disability are invited to schedule an interview by calling (718) 951-5538 or emailing [testingcsds@brooklyn.cuny.edu](mailto:testingcsds@brooklyn.cuny.edu). If you have already registered with CSDS, email [Josephine.Patterson@brooklyn.cuny.edu](mailto:Josephine.Patterson@brooklyn.cuny.edu) or [testingcsds@brooklyn.cuny.edu](mailto:testingcsds@brooklyn.cuny.edu) to ensure the accommodation email is sent to your professor.

### **Student Absence on Account of Religious Belief**

A student who, for religious reasons, does not attend classes on a particular day or days shall be excused from any examination or other work. The student shall have equivalent opportunity to make up any examination or study or work requirements. Please make every effort to notify me beforehand of any planned absences for religious reasons. For a full description of the policy, consult the Brooklyn College Bulletin.

### **Student Bereavement Policy**

Students who experience the death of a loved one can take a one week bereavement leave and may be allowed to withdraw from the semester in which the death occurs. The student must contact the Division of Student Affairs, 2113 Boylan Hall, 718.951.5352, [studentaffairs@brooklyn.cuny.edu](mailto:studentaffairs@brooklyn.cuny.edu), if they wish to implement either the Standard Bereavement Procedure or the Leave of Absence Bereavement Procedure. The Bereavement Leave of Absence is for one semester only.

The Division of Student Affairs has the right to request a document that verifies the death (e.g., a funeral program or death notice). Typically, this death involves that of a family member, in parallel to the bereavement policy for faculty and staff. It is up to the discretion of the Division of Student Affairs to determine if a death outside of the immediate family warrants implementation of the student bereavement policy. For a full description of the policy read more here:

<https://www.brooklyn.cuny.edu/web/about/initiatives/policies/bereavement.php>

**TENTATIVE COURSE SCHEDULE (subject to change)**

<b>Week (Date)s</b>	<b>Topic</b>	<b>Materials and Readings</b>	<b>Assignments</b>
<b>What is Epidemiology?</b>			
Pre-Class	<b>Introduction to the Course</b>	<ul style="list-style-type: none"> <li>• Welcome Letter</li> <li>• Syllabus</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion Board (DB) post</li> </ul>
1-3 (1/29-2/17)	<b>Definition of Epidemiology</b>	<ul style="list-style-type: none"> <li>• Lecture 1 presented as a narrated PowerPoint slideshow</li> <li>• Textbook Chapter 1</li> </ul>	<ul style="list-style-type: none"> <li>• DB post</li> </ul>
4 (2/18-2/24)	<b>Nature of the Epidemiologic Perspective I: Epi vs Clinical Medicine and Social Science</b>	<ul style="list-style-type: none"> <li>• Lecture 2</li> <li>• Articles               <ol style="list-style-type: none"> <li>1. Charles Branas - The future of epidemiology: World class science, real world impact, Columbia University Mailman School of Public Health- <a href="https://www.mailman.columbia.edu/future-epidemiology-world-class-science-real-world-impact">https://www.mailman.columbia.edu/future-epidemiology-world-class-science-real-world-impact</a> [1/11/2017 12:32:55 PM]</li> <li>2. Sandro Galea (2013) An Argument for a Consequentialist Epidemiology. <i>American Journal of Epidemiology</i>. (1185–1191)</li> <li>3. Milton Terris (1979). The Epidemiologic Tradition: The Wade Hampton Frost Lecture. <i>Public Health Reports</i> (203-209).</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Assignment 1</li> </ul>

5-6 (2/25-3/10)	<b>Nature of the Epidemiologic Perspective II: Classic Cases in Epidemiology: Snow on Cholera, Goldberger on Pellagra</b>	<ul style="list-style-type: none"> <li>Lecture 3</li> <li>Textbook Chapter 2</li> <li>Articles</li> </ul> <p>1. Timmreck, T.C. (1998). Case Study No. 1 - Snow on Cholera. In <i>An Introduction to Epidemiology</i> (419-441). Sudbury, Mass: Jones and Bartlett Publishers.</p> <p>2. Elmore, J.G. and Feinstein, A.R. (1994). Joseph Goldberger: An Unsung Hero of American Clinical Epidemiology. <i>Annals of Internal Medicine</i>, 121:372-375.</p>	<ul style="list-style-type: none"> <li>DB post</li> <li>Assignment 2</li> </ul>
<b>What are the uses of Epidemiology?</b>			
7 (3/11-3/17)	<b>Uses of Epidemiology</b>	<ul style="list-style-type: none"> <li>Lecture 4</li> <li>Articles</li> </ul> <p>1. Morris, J.N. (1955). Uses Of Epidemiology. <i>The British Medical Journal</i>, 4936 (2): 395-401</p> <p>2. Cohen, P. and Cohen, J. (1984). The Clinician's Illusion. <i>Archives of General Psychiatry</i>, 41 (12):1178-82.</p> <p>3. Motor Vehicle Safety in the US</p>	<ul style="list-style-type: none"> <li>DB post</li> <li>Assignment 3</li> </ul>
8 (3/18)  (3/19-3/24)	<b>Midterm Exam</b>  <b>Uses of Epidemiology (continued)</b>		
<b>How do you do Epidemiology?</b>			
9 (3/25-3/27)	<b>Screening Tests</b>	<ul style="list-style-type: none"> <li>Lecture 5</li> <li>Textbook Chapters 5, 18</li> </ul>	
10 (3/28-4/3)	<b>Spring Recess</b>		

11 (4/8-4/14)	<b>Screening Tests (continued)</b>	<ul style="list-style-type: none"> <li>Articles</li> <li>1. Mervosh, Sarah. How Accurate Are Virus Tests? Ohio Governor's Results Show Positives and Negatives, New York Times, August 7, 2020 <a href="https://nyti.ms/30FfU9L">https://nyti.ms/30FfU9L</a></li> <li>2. Osterholm, Michael and Olshaker, Mark. Let's Get Real About Coronavirus Tests -There aren't enough. Many are shoddy. Most aren't even designed to tell us what we really want to know. New York Times <a href="https://nyti.ms/3eRTQhb">https://nyti.ms/3eRTQhb</a></li> <li>3. Wu, Kaherine, J. Why False Positives Merit Concern, Too. New York Times October 25, 2020.</li> </ul>	<ul style="list-style-type: none"> <li>DB post</li> <li>Assignment 4</li> </ul>
12 (4/15-4/21)	<b>Disease Causation</b>	<ul style="list-style-type: none"> <li>Lecture 6</li> <li>Textbook Chapters 14, 15</li> <li>Article Meyerowitz, EA, Richterman, A, Gandhi, RT, Sax, PE. Transmission of SARS-CoV-2: A Review of Viral, Host, and Environmental Factors. <i>Ann Intern Med.</i> September 17, 2020</li> </ul>	<ul style="list-style-type: none"> <li>DB post</li> <li>Assignment 5</li> </ul>
13 (4/22-4/28)	<b>The Occurrence of Disease I: Surveillance and Measures of Morbidity</b>	<ul style="list-style-type: none"> <li>Lecture 7</li> <li>Textbook Chapter 3</li> </ul>	<ul style="list-style-type: none"> <li>DB post</li> <li>Assignment 6</li> </ul>
14 (4/29-5/5)	<b>The Occurrence of Disease II: Surveillance and Measures of Mortality</b>	<ul style="list-style-type: none"> <li>Lecture 8</li> <li>Textbook Chapters 4, 6</li> </ul>	<ul style="list-style-type: none"> <li>Assignment 7</li> </ul>
15-16 (5/6-5/17)	<b>Descriptive and Analytic Methods</b>	<ul style="list-style-type: none"> <li>Lecture 9</li> <li>Textbook Chapters 9, 11</li> </ul>	<ul style="list-style-type: none"> <li>Assignment 8</li> </ul>
17 (5/20)	<b>Final Examination</b>		

#### Important Dates:

Friday, January 29 First day of Spring 2021 classes  
Thursday, February 4 Last day to add a course  
Monday, May 17 Last day to withdraw from a course with a "W" grade  
Tuesday, May 18 Reading Day  
Wednesday, May 19 Final Examinations Begin  
Tuesday, May 25 Final Examinations End / End of Spring Semester