



Course Title: Principles and Methods of Epidemiology
Course Number: PHCO 0502-JWEB
Course Location: <https://tlt.rutgers.edu/canvas>
Class lectures, readings, homework assignments, quizzes, syllabus updates, and resources will be posted and updated regularly. *It is critical that you check the Canvas site regularly to ensure that you don't miss important updates or supplementary class material.*
Help with technical problems with Canvas is available 24/7:
Email help@canvas.rutgers.edu or call: 877-361-1134

Course Date & Time: July 11th to August 19th
Weekly modules Mondays to Sundays

Course Instructor: **Nisha Jani PhD, MPH**
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Office Hours: Wednesdays 10:00 am – 11:00 am

<https://rutgers.zoom.us/j/91731689875?pwd=UzVOUE92SE5pYXBtd1VIS0Y1NjBWUT09>

Course Assistant: John Aremu DDS, MPH
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Office Hours: By appointment

Required Text: Friis & Sellers, Epidemiology for Public Health Practice, 6th Edition

Course Description: This course is an introduction to the principles and methods used in the practice of epidemiology. This course is delivered online using the Canvas platform. Each module will include an outline with the learning objectives, assigned readings and video recordings, homework assignments, and self-assessment activities. Students are expected to cover two modules per week and to complete all assigned discussions, graded assessments, quiz, and a cumulative final exam.

Competencies Addressed

The competencies addressed in this course include:

- Explain public health history, philosophy and values
- List major causes and trends of morbidity and mortality in the United States or other community relevant to the school or program

- Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
- Explain the critical importance of evidence in advancing public health knowledge
- Apply epidemiological methods to the breadth of settings and situations in public health practice
- Identify key sources of data for epidemiologic purposes, such as vital statistics and disease registries.
- Recognize specific features of different study designs and identify their respective strengths and weaknesses.

Course Objectives

By the completion of this course, students will be able to:

- Explain the basic concepts of descriptive and analytical epidemiology.
- Discuss uses and applications of epidemiology
- Define the influence of population dynamics on community health
- Identify an epidemiologic study design by its description
- List the main characteristics, advantages, and disadvantages of epidemiologic studies
- Apply the criteria used to assess a causal association
- Calculate appropriate epidemiologic measures based upon the study design

Course Requirements and Grading

- This is a fully asynchronous, online course that will be completed in 6 weeks over the Summer 2022 semester. We will cover 14 modules/units during this 6-week period; most weeks you will be completing three module. Each week will run from Monday (12:01 AM) to Sunday (11:59 PM).
- Each module will include readings, videos, a self-assessment and at least one homework assignment.
- Every 2-3 modules will have a discussion and a timed quiz.

Homework Assignments Web homework assignments have no time limit. All assignments must be completed and submitted by the specified due date and time. The course includes 14 homework assignments and the lowest score on a homework assignment will be dropped.

Late submissions will result in the following deductions:

- 15% automatic deduction if submitted **within 24 hours** following the due date/time
- 30% automatic deduction if submitted **within 48 hours** following the due date/time
- Homework will **NOT** be accepted **after 48 hours** following the due date/time

Five Timed Quizzes will be completed on Canvas and will cover 2-3 modules. All quizzes will have a time limit (usually 1-2 hours) and can only be submitted once. The format will be a combination of multiple choice, calculations, and short answer questions. Students who complete readings, watch videos, submit homework (and understand their answers!) and participate in the discussion successfully should be able to do well on the assessments. The quizzes will be made available **starting Friday at 12:01 AM** and open until Sunday evening (**due by 11:59pm on Tuesday**). **Late quizzes will not be accepted, no exceptions!**

Discussions: We will have a total of 5 discussion (one for every 2-3 modules). All students will be asked to read the discussion board for current topics, article and question. Each student is to provide a unique

post and a response to one other student's post. The Discussion Grade will be based on participation in the class discussions— including number of posts, thoughtfulness of comments and relevancy to epidemiology. The Discussion grades are assigned on a 3-level scale. The main determinant of discussion grades is effort and content (see detail below): **Have you participated actively and on time?** Are you trying to apply what you are learning to the discussion?

Discussion Board Grading Rubric:

Contributions	Description
Provocative	Goes beyond simply answering the prompt; relevant to epidemiology and concepts learned in class; attempts to stimulate further thought & discussion; respectful of other’s posts
Substantial	Response provides most of the content required by the prompt, but does not require further analysis of the subject, some relevancy to public health and epidemiology
Superficial	Response provides obvious information without further analysis of the concept; lacks depth of knowledge or reasoning; very little public health application
None	No response provided to the prompt within the associated timeframe

Cumulative Final Exam: Will cover all the material covered during the semester. The exam will be given online and need to be completed within the time window assigned. This test is largely a combination of multiple choice, calculations, and short answer questions similar to the quizzes.

Communication: You can ask (and answer!) questions by posting them on Canvas. Students are encouraged to get to know each other and contribute his/her particular strengths, expertise, and experience to enrich the class. Working with your classmates, explaining concepts to each other, and interacting with your instructors are the most effective ways to understand the principles of epidemiology and succeed in this course. ***By posting questions on Canvas (rather than via email) the entire class has the benefit of learning from the discussions so please consider posting as a first option.*** Students may also use Canvas e-mail to send questions to the instructors or other students. By using Canvas, the instructors can make sure that course-related questions are responded to. The instructor will make every effort to respond within 24 hours, either directly to the student or by posting to the discussion section for the entire class. Students who would like to speak to the instructor by phone or in-person should make an appointment via e-mail.

Final letter grades are based on the total average weighted percentage as shown below:

Honor code	1%
Introduce yourself on Canvas	1%
(13) Homework Assignments	28%
(5) Assessments/Quiz	40%
(5) Discussion	10%
(1) Cumulative Final Exam	20%

Grading scale:

94 – 100	A	80 – <84	B-
90 – <94	A-	77 – <80	C+
87 – <90	B+	70 – <77	C
84 – <87	B	<70	F

*Grades will NOT be rounded.

POLICIES AND FURTHER

INFORMATION

- **School of Public Health Honor Code:** The School of Public Health Honor Code is found in the student bulletin (rutgers.edu/academics/catalog/index.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another’s work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the school community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.
- **Students with Disabilities:** Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student must Apply for Services by first completing a Registration Form with the Rutgers Office of Disability Services (ODS) at <https://ods.rutgers.edu/rutgers.edu>. The student will also be required to participate in an ODS intake interview and provide documentation. If reasonable accommodations are granted, ODS will provide you with a Letter of Accommodations should be shared with your instructors as early in your courses as possible.
- **Graduate Student Computer Policy:** Students are required to possess a personal laptop, no older than approximately two years, that must meet minimum requirements which may be found online at:
- rutgers.edu/student_life/computer_requirements.html

- Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.
- **Withdrawal/Refund Schedule:** Students who stop attending their course(s) without processing an [Add/Drop Course](#) form will receive a failing grade. Furthermore, students dropping to zero credits for the semester are considered withdrawn and must submit a completed [Leave of Absence](#) form from the School of Public Health's Office of Student Affairs. The School of Public Health refunds tuition only. Administrative and technology fees are non-refundable. You may find the Withdrawal/Refund Schedule on the School of Public Health website at:
- <https://sph.rutgers.edu/academics/academic-calendar.html>
- **Important Dates to Remember:** For this course, **July 15th** is the last day to add a course to existing schedule and **July 15th** is the last day to drop course w/o "W" grade if not withdrawing in full. **August 5th** is the last day to withdraw with a grade of W.

Minimum Grade Requirement for Select Prerequisite Courses

PHCO 0502 Principles and Methods of Epidemiology serves as a prerequisite course for many upper-level research and quantitative courses. Some of these upper-level courses require not only completion of PHCO 0502 but also require a minimum grade requirement (i.e., a grade of "B" or better) in PHCO 0502. Students who have completed the prerequisite course with the required minimum grade will be allowed to register for upper-level courses that require a minimum grade. Students who have completed the prerequisite course with a grade less than the required minimum grade should review the [Minimum Grade Requirement for Select Prerequisite Courses Policy](#) for more information. Students may review the Curriculum Worksheet for their concentration to learn which upper-level courses have a minimum grade requirement.

PHCO 502 Summer 2022 Course Schedule:

Module	Topic	Book CH	Assignment	Due
Week 1: 7/11 – 7/17	Introduction to Epidemiology and History of Epidemiology	CH 1	HW 1	7/15
	Honor Code acknowledgement			7/15
Week 2: 7/18 – 7/24	Practical Applications of Epidemiology	CH 2	HW 2	7/24
	Morbidity and Mortality	CH 3	HW 3	7/24
		Discussion 1*		7/21 & 7/24
		Quiz 1 (Module 1-3)		7/22–7/24
Week 3: 7/25 – 7/31	Descriptive Epidemiology	CH 4	HW 4	7/31
	Data Sources	CH 5	HW 5	7/31
	Study Design- Observational Studies: Ecological & Cross-Sectional	CH 6	HW 6	7/31
		Discussion 2*		7/28 & 7/31
		Quiz 2 (Module 4-6)		7/29–7/31
Week 4: 8/1 – 8/7	Case Control Studies	CH 6	HW 7	8/7
	Cohort Studies	CH 7	HW 8	8/7
	Experimental Study Designs	CH 8	HW 9	8/7
		Discussion 3*		8/4 & 8/7
		Quiz 3 (Module 7-9)		8/5–8/7
Week 5: 8/8 – 8/14	Effect Measures	CH 9	HW 10	8/14
	Data Interpretation	CH 10	HW 11	8/14
	Screening Tests	CH 11	HW 12	8/14
		Discussion 4*		8/11 & 8/14
		Quiz 4 (Module 10-11)		8/12–8/14
Week 6: 8/15 – 8/19	Epidemiology of Infectious Diseases	CH 12	HW 13	8/17
	Introduction to Molecular, Social, and Behavioral Epidemiology	CH 14&15	HW 14	8/17
		Discussion 5*		8/15 & 8/17
		Quiz 5 (Module 13-14)		8/15–17
	Cumulative Final Exam	Final Exam		8/19

*First and second discussion posts are due on Thursday and Sunday respectively, except for discussion 5 (due on Monday and Wednesday of the last week of the course).

Please note that the weeks run from Monday to Sunday, except for the final week (week 6).