

- Course Title:** Principles and Methods of Epidemiology
- Course Number:** PHCO 0502
- Course Location:** Room 1023, One Riverfront Plaza, Newark, N.J.
- Course Date & Time:** Wednesday 6-8 pm
- Course Instructor:** William Halperin, MD, MPH, DrPH, Professor of Epidemiology  
[william.halperin@rutgers.edu](mailto:william.halperin@rutgers.edu) (Room 1016, One Riverfront Plaza, 973-972-1862)
- Office Hours:** Wednesday 5-6 PM
- Course Assistant:** -
- Course Prerequisite(s):** Passed the Quantitative Skills Assessment
- Course Website:** Email
- Required Course Text:** **Epidemiology by Leon Gordis; Fifth Edition; Elsevier/Saunders; Paper version very highly encouraged**

**Additional/Supplemental Readings/Resources:** None

**Course Description:** Introduces students to the study of disease and ill health through their patterns of occurrence in human populations. The approaches of epidemiology in estimating the burden of disease; in making inferences about cause of disease; and in evaluating primary, secondary, and tertiary prevention strategies are presented.

**Competencies Addressed:** The competencies addressed in this course include:

- A. Explain public health history, philosophy and values;
- B. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program;
- C. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.;
- D. Explain the critical importance of evidence in advancing public health knowledge;
- E. Apply epidemiological methods to the breadth of settings and situations in public health practice;
- F. Identify key sources of data for epidemiologic purposes, such as vital statistics and disease registries; and
- G. Recognize specific features of different study designs and identify their respective strengths and weaknesses.

**Course Objectives:**

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

**Assessment of Competencies:** Course competencies are tied to objectives and assessments as follows:

Competency	Course Objective(s)	Chapter	Assessment(s) of Competency			
			Homework	Case Exam	Project	
A	b	1-2, 17-20	Yes	yes	yes	yes
B	c, g	1-2, 19	Yes	yes	yes	yes
C	b, g	5-6, 17-18	Yes	yes	yes	yes
D	a, b, f	3, 14	Yes	yes	yes	yes
E	b, e, f, g	3-4, 7- 8, 14	Yes	yes	yes	yes
F	a, c, g	9-13	Yes	yes	yes	yes
G	d, e, g	9-10, 13, 15	Yes	yes	yes	yes

**Course Requirements and Grading:**

The following is ok with some changes in caps.

- Homework assignments: almost all chapters in the text, “Gordis” have a set of questions. The answers to the questions may be found in an appendix. Students must submit the answers to the questions **showing their work** at the beginning of class. Keep a copy in order to follow along when problems are worked in class. Submission of these problem sets will count for 5% of the final grade. They must be submitted as paper copy, not by email. Typed or handwritten are both acceptable but must be turned in at start of class. **DO NOT EMAIL.**
- Case studies including class participation: There will be 1-2 case studies that take 3 to 9 hours of class time to complete in small groups. Participation in case studies will count for 5% of the final grade.
- Examinations: There will be three graded exams including two midterms and a final. Students are responsible for all material up to but not including the class before the exam except of the final examination for which students are responsible for all material in the course. Concepts that are not uniformly understood by the class as demonstrated by exam performance will be seen in the subsequent exams. The goal is to master the material by the conclusion of the course. To encourage persistence and optimism if the second exam

score exceeds the first, then the second will replace the first. Similarly, if the final exam score exceeds the second, then the final exam score will replace the second. The first exam will count for 15% of the final grade, the second exam 20% and the final exam 35%.. Exams will be open book, open notes. Per the Honor Code during exams there may be ABSOLUTELY NO communication of any sort among students

- Poster and Paper: Teams of students will produce a poster concerning the Rose Paradox. A model is provided on page 354 of the text. A formatted Powerpoint slide will be provided. A companion paper documenting the analysis is also required. More detail will be provided in class. .
- A list of activities, assignments, projects, exams, etc. that contribute to course grade, and the respective point/percentage value of each. For example:

1. Examination #1	15 pts.
2. Examination #2	20 pts.
3. Exam 3	35 pts.
4. Homework & Classwork	10pts
5. Poster and Paper	20pts
Total:	100 pts.
- Final Grades: The final grade point distribution will be transformed prior to assigning letter grades. In other words, since the examinations are designed to determine whether the course material has been effectively transmitted to the students, the average raw final score for the class may be in the 60-70 range and top scores may be in the 80s. These scores will be transformed so that final grades for students will overwhelmingly fall in the A to B range. Very low grades usually result from violations of the honor code, illness, family or work crisis etc. Please discuss your situation EARLY with the professor, your adviser, the ombudsman-person, a health counselor etc. in order that accommodation and remediation may be planned. Please pay special attention to the “withdrawal dates.”
- **Course Schedule:** See attachment
- *I agree to the following statement.*

**Learning Management System:** A learning management system is not being used in this course. Communication will be via Rutgers University Email . Grades will be posted on Banner.

**Learning Management System:** Canvas will be used extensively throughout the semester for course syllabus, assignments, announcements, communication and/or other course-related activities. It is the student’s responsibility to familiarize themselves with Canvas and check it regularly. If you have difficulties accessing Canvas, please inform the instructor and Canvas Support ([help@canvas.rutgers.edu](mailto:help@canvas.rutgers.edu)). Canvas is accessible at [canvas.rutgers.edu](https://canvas.rutgers.edu).

**School of Public Health Honor Code:** The School of Public Health Honor Code is found in the student bulletin ([sph.rutgers.edu/academics/catalog.html](https://sph.rutgers.edu/academics/catalog.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 [ods.rutgers.edu](https://ods.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 which should be shared with your instructors as early in your courses as possible.

**Commitment to Safe Learning Environment:** The Rutgers School of Public Health is committed to helping create a safe learning environment for all students and for the School as a whole. Free expression in an academic community is essential to the mission of providing the highest caliber of education possible. The School encourages civil discourse, reasoned thought, sustained discussion, and constructive engagement. Provocative ideas respectfully presented are an expected result. An enlightened academic community, however, connects freedom with responsibility. The School encourages all students to disclose any situations where you may feel unsafe, discriminated against, or harassed. Harassment or discrimination of any kind will be not tolerated and violations may lead to disciplinary actions.

**Reporting Discrimination or Harassment:** If you experience any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking, know that help and support are available. You may report such incidents to the [RBHS Title IX Office](#) or to the School of Public Health's [Office of Student Affairs](#). Rutgers University has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. If you experience any other form of discrimination or harassment, including racial, ethnic, religious, political, or academic, please report any such incidents to the School's [Office of Student Affairs](#). The School strongly encourages all students to report any incidents of discrimination or harassment to the School. Please be aware that all Rutgers employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers as listed in Appendix A to [Policy 10.3.12](#)) are required to report information about such discrimination and harassment to the School and potentially the University. For example, if you tell a faculty or staff member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty or staff member must share that information with the [RBHS Title IX Coordinator](#). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can find a list of resources in Appendix A to University [Policy 10.3.12](#). For more information about your options at Rutgers, please visit [Rutgers Violence Prevention and Victim Assistance](#).

**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: [sph.rutgers.edu/student-life/computer-support.html](https://sph.rutgers.edu/student-life/computer-support.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.

**Policy Concerning Use of Turnitin:** Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com (directly or via learning management system, i.e. Canvas) for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. Students who do not agree should contact the course instructor immediately.

**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: [sph.rutgers.edu/academics/school-calendar.html](http://sph.rutgers.edu/academics/school-calendar.html)

WEEK	CLASS	DATES NEWARK	EXAM	HW CHAPT	EVENTS
1	1	01/22/20			VIDEO; PRETEST
2	2	01/29/20		1,2,3	SURVEILLANCE
3	3	02/05/20		4,5	
4	4	02/12/20		6,7	INITIAL POSTER TOPIC PROPOSAL
5	5	02/19/20		8,9	PRETEST
6	6	02/26/20	1		1 THRU 8; POSTER TOPIC DUE
7	7	03/04/20		10,11	
8	8	03/11/20		12,13	
SPRING BREAK		03/18/20			DRAFT POSTER DUE
9	9	03/25/20			PRETEST
10	10	04/01/20	2		1 THRU 13
11	11	04/08/20		14,15	FINAL POSTER DUE
12	12	04/15/20		16,17,18	PAPER DUE
13	13	04/22/20		19,20	POSTER SESSION
14	14	04/29/20			PRETEST
15	15	05/06/20	3		1 THRU 20