Epidemiology (3 cr.)
10:832:335 – Section H1 - Summer Session II
July 6 – August 12th, 2025
Online via eCollege

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Email: abruzzi@rci.rutgers.edu or abruzzi@alypso.net

When you email me, please specify “Epi online” in your message to facilitate my reply.

Stay in touch after the class ends: I’m on LinkedIn
Office Hours: Daily by phone, 3-7 PM and other times by arrangement.

Course Web Site: http://eCollege.Rutgers.edu
Technical problems with eCollege, available 24/7: help@ecollege.rutgers.edu • 877-778-8437

**Note to Mac users: students have sometimes reported problems using Safari as their internet browser. Please call the eCollege tech support as soon as possible to see if there are any reported problems with the version of your browser. Be sure to download and test a substitute such as Firefox well in advance of any quizzes or exam deadlines.

Method of instruction:

This online course is run as a group independent study. What does that mean? It means that within a certain specified time period, you work through the material at your own pace, with my support. Other than meeting my deadlines, there are no preset times you need to be online. You also get to select which readings you do in the reading room, and so in that sense get to customize the course to your interests. There are no pre-taped lectures; rather, I prefer to provide detailed lecture notes and other support materials. You are also expected to participate in a weekly student discussion forum on current events that relate to epidemiology.

Course Description:

This course covers the principles and methods of epidemiology, the study of the distribution and determinants (causes) of disease and injury in human populations. Upon completion of this course, students will have an understanding of common study designs, be able to calculate typical outcome measures, and be able to critically read the public health literature and evaluate the results of epidemiologic studies.

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<tr>
<th>Learning Goals: Upon completion of Epidemiology a student should be able to…</th>
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<td>1. Describe the historical roots of epidemiologic thinking and their contribution to the evolution of the scientific method.</td>
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<td>2. Explain how ethical principles affect epidemiologic research.</td>
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<td>3. Use rates and proportions to express numerically the amount and distribution of health- and non-health-related outcomes.</td>
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<td>4. Use the distribution of a health-related outcome in groups to generate hypotheses that might provide a causal explanation.</td>
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<td>5. Explain basic statistical and epidemiologic concepts of estimation, inference, and adjustment to establish association.</td>
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<td>6. Explain how to use evidence of an association to make a judgment about whether an association is causal using the principles of contributory cause.</td>
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<td>7. Describe the basic epidemiologic study designs that are used to test hypotheses, identify associations, and establish causation.</td>
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<td>8. Describe the concepts of measurement of test performance and be able to apply the concepts of testing and screening in different settings.</td>
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<td>9. Apply the concepts of benefits, harms, and cost to a public health decision.</td>
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10. Describe the broad applicability of epidemiologic methods to clinical and basic science as well as public policy.

http://www.aacu.org/sites/default/files/files/PublicHealth/Recommendations_for_Undergraduate_Public_Health_Education.pdf

Course Materials on eCollege (access with your Rutgers NetID account):

♦ The syllabus, including a calendar of class lectures topics, assignments and examination dates.
♦ Lecture notes and related materials
♦ Untimed quizzes on the lectures
♦ Student discussion forum
♦ Reading Room articles, primarily academic journal articles
♦ Timed Midterm and Final Exams
♦ Two free text books are available for your reference and are posted to the eCollege site. They are:


Grading:

The course is based on a total of 500 points as follows:

♦ Two timed online exams, each worth 140 points = 280 points total
♦ Two sets of short response questions, each worth 20 points = 40 points total
♦ Four untimed quizzes, each worth 20 points = 80 points total*
♦ Four short Reading Room reaction papers, each worth 20 points each = 80 points*
♦ Four posting in the Student Discussion forum = 20 points total

*Note: I drop your lowest quiz or reading room essay grade at the end of the semester. In order to maintain the point count for the course, I substitute a perfect score in its place. See below for more details.

Grading is based on the timely and correct submission of all assignments, and both in class and online participation.

Final Grade cut-points:

Use caution when viewing your rolling average in eCollege. Remember, how you do on an untimed quiz is may not be a good indicator of how you will do on a timed, comprehensive exam.

Your final grade for this class will be assigned using this system:

- A: 460 to 500 points (92 – 100 %)
- B+: 430 to 459.9 points (86 – 91.9 %)
- B: 400 to 429.9 points (80 – 85.9 %)
- C+: 380 to 399.9 points (76 – 79.9 %)
- C: 350 to 379.9 points (70 – 75.9 %)
- D: 300 to 349.9 points (60 – 69.9 %)
- F: 299.9 or less points (59.9 % or lower)
I automatically round up to the next grade when you are within 0.5 points of the next cut-point. So, an average of 429.5 = 430 points = B+. Note: this refers to the point count, not the percent average!

**Guidelines for Assignments and Projects**

Students are expected to work independently on all timed exams and short reply questions, discussion room postings, and reading room essays. Failure to do so will be considered a violation of Rutgers’ Academic Integrity Policy. (See below for details).

This class is divided into two parts, each covering six lectures with two timed exams, each covering the lectures and concepts from that portion of the course, which are each accompanied by a set of “take-home” short-response questions. The second exam contains some select concepts from the first half of the course, but you will be informed of these in advance. In general, my emphasis is on the lecture notes and additional resources I prepare for you. The text books are handy to use as reference sources and are intended to enhance your understanding of the lectures.

**Timed Exams (2 @ 140 points, 280 points total)**

Two timed exams will be given online and need to be completed within the time window assigned (typically, 1.5 hours). These tests are largely a combination of true and false, multiple choice, matching and include calculations similar to the online quizzes. Unlike the quizzes, each student’s exam is a random mix of questions that are presented to you one at a time. While you are able to page through and answer unfinished questions, there is not adequate time for you to look up answers while the exam is in progress. **Prepare for it as you would any in-class exam and use your time wisely.** As you will see on the schedule, you can determine when you take the exams within a multi-day period. **Pausing a timed exam once in progress is not possible.** Questions on the exams that are skipped or left blank will register as a zero towards the score you receive. Finally, **make-up exams are only given under extreme situations including technical failure and may carry up to a 10% penalty.** Make sure you have a stable internet connection and your browser is compatible. If you have any doubts about your browser, please contact the eCollege help desk **PRIOR to starting the exam.** Please note: technical failure due to documented eCollege issues are exempt from penalty.

**Short Response Questions (2 @ 20 points, 40 points total)**

Each exam will be accompanied by several short response questions. The questions will be released when the exam opens and are due the drop box by the date the exam closes. See the calendar for details. Unlike the exam, they are not timed so you should be able to carefully compose your answers.

**Quiz 4 @ 20 points each, worth 80 points total:****

Four untimed, online quizzes will become available to you on our eCollege course site on the day it is assigned. Each quiz contains 20 questions, which are worth a point each. Quizzes may be worked on for an unlimited amount of time before the due date and of course you are expected to use your notes. Questions tend to emphasize calculations and the interpretation of data, and may be reasonably thought of as “problem sets”. Do not skip questions as they will register as a zero towards your score. Your score and the correct answers to the quiz will be available in the gradebook approximately two days after the quiz closes. There is a penalty (up to 10%) for taking a Quiz past the scheduled closing date and this must be arranged with me prior to the closing date of the Quiz. **In general, it is not possible to take a quiz after the answers are released to the class and there are no make-ups for missed quizzes, but you will be allowed to drop your lowest quiz score.**

**Reading Room essays (4 essays @ 20 points, worth 80 points total):**

I offer a variety of readings for you to pick from in each Reading Room. You are required to do the two readings that interest you most per reading room and use them to respond to one of the questions posted in the reading room forum. The essays should be about 3 good paragraphs in length and you must list the two readings you used. **Penalty for lateness: 10% per day. No papers will be accepted more than three days**
after the deadline. While it is not required, I strongly encourage you to read and comment on other student’s postings after the forum closes.

Grading policy for Reading Room Reaction papers:

♦ 20 points (full credit): Responds thoughtfully and thoroughly to one question (about 3 good paragraphs) using well-selected examples from the two readings you selected to support statements; explicitly references which readings were used; does not copy other student’s replies to that question (in other words, produces unique work).
♦ 1-19.9 points (partial credit): Makes general comments or simply states opinion without reference to specific readings; uses examples with insufficient detail; failure to identify readings or failure to use minimum specified number of readings.
♦ 0 points (no credit): No participation and/or copying from other student’s replies.

Participating in 4 Discussions (up to 5 points each, worth 20 points total)

Each week I will post several questions and you are required to post your response to one of them. Typically, there may be a short new video to watch or other news article that relates to the lecture material. You are welcome to post your questions on course material here and comment on other student replies.

Grading policy for online discussion responses:

♦ 5 points (full credit): participates fully in the discussion during that week, e.g., responds thoughtfully and thoroughly each week to at least one news item; uses data to support opinions; raises new questions or relates the material to the lectures.
♦ 1-4.9 points (partial credit): participates a little, e.g., makes a few general comments or simply states opinion without reference to specific readings or lecture notes.
♦ 0 points (no credit): doesn’t participate at all.

Calendar of Lectures Topics, Readings, Quiz/Problem Sets, and Exam Dates

<table>
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<tr>
<th>Dates in 2015</th>
<th>Lecture &amp; Exam schedule</th>
<th>Required from you this week</th>
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<tr>
<td>Monday – 7/6 - Sunday 7/12</td>
<td>Lecture 1: Scope and History of Epidemiology Lecture 2: Basic Outcome measures Lecture 3: Inferring cause and preventing disease</td>
<td>• Introduce yourself • Participate in Discussion • Submit Quiz #1 (lectures 1 - 3) • Submit Reading Room essay #1 • Complete your work by 11:59 PM on Sunday 7/12</td>
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<td>Monday 7/13 – Sunday 7/19</td>
<td>Lecture 4: Working with Rates Lecture 5: Screening Lecture 6: Data sources</td>
<td>• Participate in Discussion • Submit Quiz #2 (lectures 4 - 6) • Submit Reading Room essay #2 • Complete your work by 11:59 PM on Sunday 7/19</td>
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Materials will be posted to eCollege prior to the week you are responsible for the information. Unless otherwise indicated, all work must be submitted by 11:59 PM on the dates you see below.
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<tr>
<th>Monday 7/20 – Friday 7/24</th>
<th>EXAM (timed) and Short Response Questions (untimed) on Lectures 1-6</th>
<th>• Take the exam and submit the short reply questions by 11:59 PM on FRIDAY 7/24</th>
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<td>Saturday 7/25 – Friday 7/31</td>
<td>Lecture 7: Intro to study designs Descriptive Designs &amp; Descriptive Epi Lecture 8: Case Control Studies Lecture 9: Cohort Studies Part I and II</td>
<td>• Participate in Discussion • Submit Quiz #3 (lectures 7 - 9) • Submit Reading Room essay #3 • Complete your work by 11:59 PM on Friday 7/31</td>
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<tr>
<td>Saturday 8/1 – Friday 8/7</td>
<td>Lecture 10: Experimental (Intervention) Studies &amp; Data interpretation issues Lecture 11: Infectious Disease Epidemiology Part I and II Lecture 12: Environmental and Occupational Health</td>
<td>• Participate in Discussion • Submit Quiz #4 (lectures 10-12) • Submit Reading Room essay #4 • Complete your work by 11:59 PM on Friday 8/7</td>
</tr>
<tr>
<td>Saturday 8/8 – Wednesday 8/12</td>
<td>EXAM and Short Response Questions on Lectures 7-12</td>
<td>• Take the exam and submit the questions by 11:59 PM on WEDNESDAY on 8/12</td>
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For Add Drop dates, see the Office of Academic Services:
http://sasundergrad.rutgers.edu/academics/registration/index.html
The Academic Calendar is available from the Registrar at:
http://scheduling.rutgers.edu/calendar.shtml

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 with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this with me as soon as possible so that arrangements can be made in advance of the first exam. To begin this process, please complete the Registration form on the ODS web site at: https://ods.rutgers.edu/students/registration-form.

Privacy statement:
This site may contain student information that is protected by the Family Educational Rights to Privacy Act (FERPA). Disclosure to unauthorized parties violates the federal privacy laws. Online courses such as this may make student names visible to other students in class (e.g., during online discussions or group email). Please remember that this information is protected by these federal privacy laws and must not be shared with anyone outside of class.

Academic Integrity:
Honesty and Integrity are an essential part of the educational experience. It is expected that students will complete all exams, and assignments in accordance with Rutgers University’s academic rules and regulations. See the current Rutgers University Academic Catalog for details. Any evidence of academic misconduct, including cheating, failure to cite sources, plagiarism, stealing ideas, or deliberately slanting research results will result in appropriate action as dictated by Rutgers University. Please note that taking information from an Internet site and placing it into text without proper citation is plagiarism and students are subject to the same consequences as they would face for copying information from a text or journal article without proper citation. If you are unsure of the rules of citation, please ask. Rutgers provides a wealth of resources to help students understand proper citation format and coping with the pressures of academic life. For the most up-to-date policy information on Academic Integrity at Rutgers, see: http://academicintegrity.rutgers.edu/