

PUBH 3350

Introduction to Epidemiology: People, Places and Disease
Fall 2018

COURSE & CONTACT INFORMATION

Credits: 2

Meeting Day(s): Thursday

Meeting Time: 3:35 – 5:30 PM

Meeting Place: Mayo 3-125

Instructor: Ruby H.N. Nguyen, Ph.D.

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Office Phone: (612) 626-7559

Office Hours: By appointment

Office Location: West Bank Office Building, 3rd Floor

Teaching Assistant: Maggie Olson

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COURSE DESCRIPTION

The field of epidemiology can be simply defined as the study of epidemics; this definition, however, is much too limited. This course focuses on how diseases are spread within populations of people and within our communities. Diseases may be spread from person-to-person, through a carrier such as an insect, or be traditionally non-infectious. The study of disease distribution in populations and communities, the identification of factors associated with the distribution, and development and evaluation of ways to prevent disease is called epidemiology. Through an introduction to epidemiologic terminology, methods, critical thinking, and basic analysis, students will be able to describe how disease is distributed within populations and communities. Diseases to be discussed will range from sudden-onset infectious diseases (such as some foodborne illnesses) to non-infectious chronic diseases; U.S. and global views of epidemiologic research will also be discussed. Interactive class exercises and lectures will be used to introduce students to epidemiology, which is at the core of the entire field of public health. This course is intended for undergraduate students interested in any health science career, or those interested in a career that may need to use data and conclusions from epidemiologic studies, such as health journalism or public policy or the law.

COURSE PREREQUISITES

None.

COURSE GOALS & OBJECTIVES

1. To describe how epidemiology, and all of public health, involves multiple fields of study and areas of expertise.
2. To use proportions and rates to numerically express the amount of disease in specific populations.
3. To explore how the level of disease in specific populations can help an epidemiologist answer questions and generate future hypotheses that clarify how an exposure can cause a specific disease.
4. To explain the strengths and limitations of epidemiologic studies in determining causes of disease.

METHODS OF INSTRUCTION AND WORK EXPECTATIONS

Lecture and guest lecture, videos, in-class exercises and tutorials, and active participation via discussion. For lectures given by Dr. Nguyen, Power Point handouts of the slides will be available at the start of each class (hard copy) and then electronically after class on the class Moodle site. If a student is unable to take notes in that way, he/she is expected to speak with Dr. Nguyen in person or communicate over email by the end of the first week of class.

One short break of approximately 5 – 10 minutes will occur midway through each class session. **Laptop computers and other electronic devices will only be permitted during these class breaks.** See University of Minnesota administrative policy, “Use of Personal Electronic Devices in the Classroom: Twin Cities, Crookston, Morris, Rochester” (<http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html>).

Communicating with Professor Nguyen

Email is the best and most effective way to communicate with Dr. Nguyen (nguyen@umn.edu). However, students should expect responses to emails only during work hours. For example, a student who emails a request the night before an exam should not expect to hear from the instructors until at least 9:00 AM but it could be that a feasible response would not occur until after the exam.

Learning Community

School of Public Health courses ask students to discuss frameworks, theory, policy, and more, often in the context of past and current events and policy debates. Many of our courses also ask students to work in teams or discussion groups. We do not come to our courses with identical backgrounds and experiences and building on what we already know about collaborating, listening, and engaging is critical to successful professional, academic, and scientific engagement with topics.

In this course, students are expected to engage with each other in respectful and thoughtful ways.

In group work, this can mean:

- Setting expectations with your groups about communication and response time during the first week of the semester (or as soon as groups are assigned) and contacting the TA or instructor if scheduling problems cannot be overcome.
- Setting clear deadlines and holding yourself and each other accountable.
- Determining the roles group members need to fulfill to successfully complete the project on time.
- Developing a rapport prior to beginning the project (what prior experience are you bringing to the project, what are your strengths as they apply to the project, what do you like to work on?)

In group discussion, this can mean:

- Respecting the identities and experiences of your classmates.
- Avoid broad statements and generalizations. Group discussions are another form of academic communication and responses to instructor questions in a group discussion are evaluated. Apply the same rigor to crafting discussion posts as you would for a paper.
- Consider your tone and language, especially when communicating in text format, as the lack of other cues can lead to misinterpretation.

Like other work in the course, all student to student communication is covered by the Student Conduct Code (<https://z.umn.edu/studentconduct>).

COURSE TEXT & READINGS

There is one required textbook for this course: “Epidemiology”, 5 ed., Gordis. There is a link on the Moodle course site that provides a free online textbook. Hardcopies are available in the UMN Bookstore; purchasing a used copy is acceptable.

COURSE OUTLINE/WEEKLY SCHEDULE

| Week | Topic | Readings | Activities/Assignments |
|------------------|--|--|--|
| Week 1 Sept 6 | <ul style="list-style-type: none"> Introduction to epidemiology; disease distribution and determinants of disease | <ul style="list-style-type: none"> After the lecture: Chapters 1 and 2 | <ul style="list-style-type: none"> Answer the questions at the end of Chapter 2 |
| Week 2 Sept 13 | <ul style="list-style-type: none"> Guest: MDH outbreak investigation; sources of data | <ul style="list-style-type: none"> After the lecture: Chapter 3 | <ul style="list-style-type: none"> Answer the questions at the end of Chapter 3 |
| Week 3 Sept 20 | <ul style="list-style-type: none"> Measures of illness and death | <ul style="list-style-type: none"> After the lecture: Chapter 4 | <ul style="list-style-type: none"> Answer the questions at the end of Chapter 4; read through Exercise 1 |
| Week 4 Sept 27 | <ul style="list-style-type: none"> Measures of illness and death, continued; in-class exercise #1 | <ul style="list-style-type: none"> (Catch up on reading) | <ul style="list-style-type: none"> Study for Quiz 1 |
| Week 5 Oct 4 | <ul style="list-style-type: none"> Online Quiz and Out-of-Class Exercise | <ul style="list-style-type: none"> (Catch up on reading) | <ul style="list-style-type: none"> Prepare to spend class time in a quiet location to take the quiz and view the out-of-class exercise |
| Week 6 Oct 11 | <ul style="list-style-type: none"> Accuracy and reliability of medical tests; natural history and prognosis | <ul style="list-style-type: none"> After the lecture: Chapter 5 & 6 | <ul style="list-style-type: none"> Answer the questions at the end of the chapter |
| Week 7 Oct 18 | <ul style="list-style-type: none"> Introduction to study designs: randomized trials | <ul style="list-style-type: none"> After the lecture: Chapters 7 & 8 | <ul style="list-style-type: none"> Answer the questions at the end of the chapter; Final Project organization due |
| Week 8 Oct 25 | <ul style="list-style-type: none"> Guest: MDH suicide; cohort studies and other observational student designs | <ul style="list-style-type: none"> After the lecture: Chapters 9 & 10 | <ul style="list-style-type: none"> Answer the questions at the end of the chapters; study for Quiz 1 |
| Week 9 Nov 1 | <ul style="list-style-type: none"> Online Quiz and Out-of-Class Exercise | <ul style="list-style-type: none"> (Catch up on reading) | <ul style="list-style-type: none"> Prepare to spend class time in a quiet location to take the quiz and view the out-of-class exercise |
| Week 10 Nov 8 | <ul style="list-style-type: none"> Guest: Antibiotic resistance; estimating risks and associations | <ul style="list-style-type: none"> After the lecture: Chapter 11 & 12 | <ul style="list-style-type: none"> Answer the questions at the end of the chapter |
| Week 11 Nov 15 | <ul style="list-style-type: none"> Making conclusions about epidemiologic studies; bias, confounding and interaction; in-class exercise #2 | <ul style="list-style-type: none"> After the lecture: Chapter 14 & 15 | <ul style="list-style-type: none"> Answer the questions at the end of the chapter; read through the in-class exercise; Final Project methods due |
| Week 12 Nov 29 | <ul style="list-style-type: none"> Review | <ul style="list-style-type: none"> (Catch up on reading) | <ul style="list-style-type: none"> Prepare for the exam |
| Week 13 Dec 6 | <ul style="list-style-type: none"> Exam (in class) | <ul style="list-style-type: none"> | <ul style="list-style-type: none"> |
| Week 14 Dec 13 | <ul style="list-style-type: none"> Final Project | <ul style="list-style-type: none"> | <ul style="list-style-type: none"> |

SPH AND UNIVERSITY POLICIES & RESOURCES

The School of Public Health maintains up-to-date information about resources available to students, as well as formal course policies, on our website at www.sph.umn.edu/student-policies/. Students are expected to read and understand all policy information available at this link and are encouraged to make use of the resources available.

The University of Minnesota has official policies, including but not limited to the following:

- Grade definitions
- Scholastic dishonesty
- Makeup work for legitimate absences
- Student conduct code
- Sexual harassment, sexual assault, stalking and relationship violence
- Equity, diversity, equal employment opportunity, and affirmative action
- Disability services
- Academic freedom and responsibility

Resources available for students include:

- Confidential mental health services
- Disability accommodations
- Housing and financial instability resources
- Technology help
- Academic support

EVALUATION & GRADING

Students will be evaluated on in-class exercises, quizzes, out-of-class exercises, one exam and one final project. There will be a total of 1,000 class points.

In-Class Exercises (200 points – 100 points each x 2)

There will be two in-class exercises that will be submitted, graded and returned with comments. Each exercise will be worth 10% (or 100 points) of a student's grade. The first exercise will be on **September 27**. The second exercise will be on **November 15**. Details on the exercises will be discussed in class and available in Moodle.

Quizzes (200 points – 100 points each x 2)

There will be two quizzes, **October 4 and November 1**. Each will be worth 10% of a student's grade. Each quiz will be administered via Moodle out of the classroom and last 1 hour. Quizzes will be timed and begin at the start of class, 3:35 PM on the assigned days. There will be no make-up quizzes past 1 week. If you would like to request a rescheduled quiz, you must email Dr. Nguyen prior to class with your University-approved excuse for her to evaluate. If you do not do so, your request will not be granted.

Out-of-Class Exercises (100 points – 50 points each x 2)

Students will be expected to attend each class and entire class sessions. On the days of the two quizzes, **October 4 and November 1**, after the quiz students will be required to watch an assigned CDC Public Health Grand Rounds and answer the posted question in Moodle. For each successfully completed activity, the student will receive 50 pts (for a total of 100 pts) for their class participation grade.

Exam (250 points)

The midterm exam will be held on **December 6** in-class and is scheduled to last for one entire class session. The midterm exam will cover material presented in the first 7 weeks of class. The midterm will comprise a mixed format, including: definition, calculation, and short answer. If you would like to request a rescheduled midterm exam, you must contact Dr. Nguyen prior to the start of class. If you do not do so, your request will not be granted.

Final Project (250 points)

The final project is due on **December 13 at 11:55 PM via the course Moodle site**. The final project has 4 graded components listed in the class schedule below. **Further detail is provided in the final project rubric**. The final project asks that each student identify a community organization for which the student will develop an epidemiological study to address a health concern relevant to the organization. Students will describe the health issue and the study design for the proposed project. Lastly, each student will be asked to describe how the results of the study will be communicated back to the community members.

Grading Scale

The University uses plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following, and you can expect the grade lines to be drawn as follows:

| % In Class | Grade | GPA |
|------------|-------|-------|
| 93 - 100% | A | 4.000 |
| 90 - 92% | A- | 3.667 |
| 87 - 89% | B+ | 3.333 |
| 83 - 86% | B | 3.000 |
| 80 - 82% | B- | 2.667 |
| 77 - 79% | C+ | 2.333 |
| 73 - 76% | C | 2.000 |
| 70 - 72% | C- | 1.667 |
| 67 - 69% | D+ | 1.333 |
| 63 - 66% | D | 1.000 |
| < 62% | F | |

- A = achievement that is outstanding relative to the level necessary to meet course requirements.
- B = achievement that is significantly above the level necessary to meet course requirements.
- C = achievement that meets the course requirements in every respect.
- D = achievement that is worthy of credit even though it fails to meet fully the course requirements.
- F = failure because work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I (Incomplete).
- S = achievement that is satisfactory, which is equivalent to a C- or better
- N = achievement that is not satisfactory and signifies that the work was either 1) completed but at a level that is not worthy of credit, or 2) not completed and there was no agreement between the instructor and student that the student would receive an I (Incomplete).

| Evaluation/Grading Policy | Evaluation/Grading Policy Description |
|---|---|
| <p>Scholastic Dishonesty, Plagiarism, Cheating, etc.</p> | <p>You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis (As defined in the Student Conduct Code). For additional information, please see https://z.umn.edu/dishonesty</p> <p>The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://z.umn.edu/integrity.</p> <p>If you have additional questions, please clarify with your instructor. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.</p> <p>Indiana University offers a clear description of plagiarism and an online quiz to check your understanding (http://z.umn.edu/iuplagiarism).</p> |
| <p>Late Assignments</p> | <p>Late assignments will be accepted for 1 week after the deadline with a 10% reduction for each day late, which starts immediately after the deadline. For example, if the assignment was due at 3:35 PM and the assignment is submitted at 8:00 PM, it will be considered 1 day late. Late assignments will be graded on Dr. Nguyen's schedule.</p> |
| <p>Attendance Requirements</p> | <p>Attendance is mandatory when there is an assignment that is being graded, including: in-class exercises and the midterm exam.</p> |
| <p>Extra Credit</p> | <p>Extra credit may be available during the semester. However, all extra credit opportunities will be decided upon by the professor and available to all students. There will be strict criteria and deadlines to obtain the extra credit; no adherence to such criteria or deadlines would prevent a student from receiving extra credit.</p> |
| <p>Student Resources and Expectations</p> | <p>Student Services and Accommodation Descriptions</p> |
| <p>Disability Accommodations</p> | <p>The University of Minnesota is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center Student Services is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.</p> <p>If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DRC at 612-626-1333 or drc@umn.edu to arrange a confidential discussion regarding equitable access and reasonable accommodations.</p> <p>If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.</p> <p>For more information, please see the DS website, https://diversity.umn.edu/disability/.</p> |
| <p>Mental Health</p> | <p>As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: http://www.mentalhealth.umn.edu.</p> |
| <p>Equity and Diversity</p> | <p>The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf.</p> |

**Appropriate Student
Use of Class Notes
and Course Materials**

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see:
<http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.