

School of Public Health

Syllabus and Course Information



UNIVERSITY OF MINNESOTA
Driven to DiscoverSM

PubH 3350

People, Places and Disease: Introduction to Epidemiology Spring 2016

Credits:	2
Meeting Days:	Thursdays
Meeting Time:	3:35 - 5:30 PM
Meeting Place:	Mayo 3-125
Instructor:	Dr. Ruby H.N. Nguyen
Office Address:	Suite 300, West Bank Office Building, 1300 S. 2nd Street, Minneapolis
Office Phone:	612-626-7559
Fax:	612-624-0315
E-mail:	nguyen@umn.edu
Office Hours:	Thursdays, 2:30 – 3:15 p.m. in SPH Student Services, Mayo A395, and by appointment
Teaching Assistant:	Ainslee Neu
E-mail:	neuxx050@umn.edu

I. 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.

II. Course Prerequisites

None

III. Course Goals and Student Learning Objectives

1. Students will learn to describe how epidemiology, and all of public health, involves multiple fields of study and areas of expertise. To achieve this goal students will be exposed to a diverse offering of topics spanning epidemiology and public health through didactic lectures, readings, and incorporation of timely news media into the course.
2. Students will learn how to use proportions and rates to numerically to express the amount of disease in specific populations. To achieve this outcome students will learn how to calculate principal rates used in epidemiology, including: prevalence, incidence, and mortality rates.
3. Students will 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. In achieving this, students will strengthen their problem-solving skills for addressing public health concerns.
4. Students will explain the strengths and limitations of epidemiologic studies in determining causes of disease. Achieving this objective will assist students' understanding of the problem-solving process used in epidemiology to determine whether a particular exposure may cause a certain disease.

IV. Methods of Instruction and Work Expectations

Lecture and guest lecture, short 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 immediately after the class ends from the class Moodle site.

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.

V. Course Text and Readings

One textbook is required: "Epidemiology", 5th edition, by Gordis; this text will be the primary reading material.

VI. Course Outline/Weekly Schedule

The course outline is represented as the weekly schedule. See the weekly schedule attached.

VII. Evaluation and Grading

Students will be evaluated on class participation, exercises, quizzes, and exams. There will be a total of 1,000 class points.

Class Participation (100 points maximum)

Students will be expected to attend each class and entire class sessions. Full credit (100 points) will be assigned only if all 4 activities were accomplished. 50 pts will be provided with attendance and a question submitted for each of the two special lectures in the Mayo Auditorium on **February 11th** and **April 21st**.

Exercises (200 points – 100 points each)

There will be 2 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 due on **February 11th**. The second exercise will be due on **April 7th**. Details on the exercises will be discussed in class and available in Moodle. Both are due via hardcopy, typed, stapled and in-person at the beginning of class.

Quizzes (200 points – 100 points each)

There will be two quizzes, **February 18th** and **April 28th**. Each will be worth 10% of a student's grade. Each quiz will last 1 hour and occur during the second half of the class period. No make up quizzes past 1 week.

Exams (500 points – 250 points each)

The midterm exam will be held on **March 10th** 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.

The final exam will be a take-home exam distributed via Moodle on Thursday, April 21st, 2016. The final exam must be submitted no later than the scheduled final exam date and time of **Friday, May 13th, 2016 before 8:00 AM Central Time via the course Moodle site**. The final exam is cumulative; all topics presented in class during the semester are eligible to appear on the final exam. The final exam will comprise a mixed format, including: definition, calculation, short answer, and essay.

Late assignments will be subject to a 5% deduction in grade for each day it is late. Incomplete and missing assignments will be given a 0 point value. Students are encouraged to frequently check their Moodle grade book to assess any inconsistencies or missing work. Arrangements to reschedule exams must be made prior to the exam time by at least one full day. Exams that are unable to be rescheduled within 7 school days after the exam was completed will be given a 0 point value.

Grading

Course grades will be determined with the following percentages:

90% - 100%	A	90% - 92.9%	A-	
80% - 89.9%	B	80% - 82.9%	B-, 88% - 89.9%	B+
70% - 79.9%	C	70% - 72.9%	C-, 78% - 79.9%	C+
50% - 69.9%	D			
< 50%	F			

Students taking the course Pass/Fail (S/N) are required to receive at least 70% to receive a Pass (S) grade.

The University utilizes plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following:

A 4.000 - Represents achievement that is outstanding relative to the level necessary to meet course requirements

A- 3.667

B+ 3.333

B 3.000 - Represents achievement that is significantly above the level necessary to meet course requirements

B- 2.667

C+ 2.333

C 2.000 - Represents achievement that meets the course requirements in every respect

C- 1.667

D+ 1.333

D 1.000 - Represents achievement that is worthy of credit even though it fails to meet fully the course requirements

S Represents achievement that is satisfactory, which is equivalent to a C- or better.

For additional information, please refer to:

<http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html>.

Course Evaluation

The SPH will collect student course evaluations electronically using a software system called CourseEval: www.sph.umn.edu/courseeval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade in SPHGrades: www.sph.umn.edu/grades. All students will have access to their final grades through OneStop two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are an important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

Incomplete Contracts

A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an "I" requires that a contract be initiated and completed by the student before the last official day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student's college). For more information and to initiate an incomplete contract, students should go to SPHGrades at: www.sph.umn.edu/grades.

University of Minnesota Uniform Grading and Transcript Policy - A link to the policy can be found at onestop.umn.edu.

VIII. Other Course Information and Policies

Grade Option Change (if applicable)

For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at onestop.umn.edu.

Course Withdrawal

Students should refer to the Refund and Drop/Add Deadlines for the particular term at onestop.umn.edu for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Office of Admissions and Student Resources at sph-ssc@umn.edu for further information.

Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities,

and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Use of Personal Electronic Devices in the Classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference:

<http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

Scholastic Dishonesty

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. (Student Conduct Code:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see:

<http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html>.

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: <http://www1.umn.edu/oscai/integrity/student/index.html>. If you have additional questions, please clarify with your instructor for the course. 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.

Makeup Work for Legitimate Absences

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see:

<http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html>.

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>.

Sexual Harassment

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the

University setting. For additional information, please consult Board of Regents Policy: <http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf>

Equity, Diversity, Equal Opportunity, and Affirmative Action

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.

Disability Accommodations

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. Disability Services (DS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DS at 612-626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

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.

For more information, please see the DS website, <https://diversity.umn.edu/disability/>.

**** Students with a disability accommodation should email Dr. Nguyen by January 27th regarding their status for accommodation(s). ****

Mental Health and Stress Management

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>.

The Office of Student Affairs at the University of Minnesota

The Office for Student Affairs provides services, programs, and facilities that advance student success, inspire students to make life-long positive contributions to society, promote an inclusive environment, and enrich the University of Minnesota community.

Units within the Office for Student Affairs include, the Aurora Center for Advocacy & Education, Boynton Health Service, Central Career Initiatives (CCE, CDes, CFANS), Leadership Education and Development –Undergraduate Programs (LEAD-UP), the Office for Fraternity and Sorority Life, the Office for Student Conduct and Academic Integrity, the Office for Student Engagement, the Parent Program, Recreational Sports, Student and Community Relations, the Student Conflict Resolution Center, the Student Parent HELP Center, Student Unions & Activities, University Counseling & Consulting Services, and University Student Legal Service.

For more information, please see the Office of Student Affairs at <http://www.osa.umn.edu/index.html>.

Academic Freedom and Responsibility: for courses that do not involve students in research

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

OR:

Academic Freedom and Responsibility, for courses that involve students in research

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom and conduct relevant research. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.* When conducting research, pertinent institutional approvals must be obtained and the research must be consistent with University policies.

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

Template update 9/2014

**Class Schedule PubH 3350: People, Places and Disease:
Introduction to Epidemiology**

Thursdays, 3:35 – 5:30 p.m., Spring 2016

WEEK 1 - January 21: What is epidemiology?

We will also review the syllabus and class schedule

Lecture: Defining epidemiology, and describing sources of data

Reading: Chapter 1, 3

WEEK 2 - January 28

Lecture: Surveillance; incidence; prevalence; outbreak investigation

Reading: Chapter 2

EXERCISE 1 assigned

WEEK 3 - February 4: How do we track diseases and identify epidemics?

Lecture: Describing clinical and sub-clinical disease; incubation period; survival time

Reading: Chapters 4, 6

WEEK 4 - February 11: How do diseases change over time?

Lecture: Special lecture with Dr. Michael Osterholm

Reading: Chapter 19

EXERCISE 1 due at the beginning of class

WEEK 5 - February 18: Are there ways to experiment in epidemiology?

Design and interpretation of randomized clinical trials

Reading: Chapters 7 & 8

QUIZ 1 (covering Weeks 1 – 4)

WEEK 6 - February 25: Observational Studies: Cohort and Case-Control Study Designs

Lecture: Design and interpretation of cohort study and case-control study designs

Reading: Chapters 9, 10 & 13

WEEK 7 - March 3: What type of study would you design?

Lecture: Background information will be provided for an important public health problem. The lecture will be a review and interactive session involving previous material.

Reading: A peer-reviewed article will be distributed in Week 6.

WEEK 8 - March 10: MIDTERM EXAM

Week 9 - March 17th: SPRING BREAK – NO CLASS

WEEK 10 - March 24th: Are exposures and outcomes associated?

Lecture: Absolute risk; relative risk; odds ratio; interpretation of risk estimates

Reading: Chapters 11 & 12

EXERCISE 2 DISTRIBUTED

WEEK 11 - March 31: What conclusions can we make from epidemiology studies?

Lecture: Making inferences from epidemiologic studies and validity & reliability; evaluating screening programs

Reading: Chapters 5 & 18

WEEK 12 – April 7:

Lecture: Bias, Confounding and interaction; criteria for causation with a critical eye on assessing the quality of the data we use for causation.

Reading: Chapter 14 & 15

EXERCISE 2 due at the beginning of class

WEEK 13 - April 14:

Lecture: Epidemiology of chronic pain in the U.S.

Reading: Selected peer-reviewed journal articles will be announced closer to the date

WEEK 14 - April 21: Art and Science of Prevention Seminar

Lecture: Health policy & epidemiology

Reading: Chapter 17

WEEK 15 – April 28:

Lecture: Ethical and professional issues in epidemiology

Reading: Chapter 20

QUIZ 2 (covering Weeks 10 – 15)

WEEK 16 – May 5:

Lecture: Identifying the roles of genetic and environmental factors in disease causation

Reading: Chapter 16

TAKE-HOME FINAL EXAM POSTED TO MOODLE

DUE DATE for Take-Home Final Exam for this course via Moodle:

8:00 a.m. Central Time, FRIDAY, May 13th, 2016

GRADE AND ASSIGNMENT SUMMARY

Assignment	Due Date	Points	% of Grade
EXERCISE 1	Feb 11	100	10%
QUIZ 1	Feb 18	100	10%
MIDTERM	March 10	250	25%
EXERCISE 2	April 7	100	10%
QUIZ 2	April 28	100	10%
FINAL EXAM	May 13	250	25%
Class Participation	TBA	100	10%
Total		1,000	100%

*** Students should periodically check the course Moodle site to check their grade entries. No retroactive changes to the grade book will be made after December 10th, the last day of class.**