

# School of Public Health

## Syllabus and Course Information



UNIVERSITY OF MINNESOTA  
Driven to Discover<sup>SM</sup>

### PubH 3350

## People, Places and Disease: Introduction to Epidemiology Fall 2015

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<b>Credits:</b>	2
<b>Meeting Days:</b>	Thursdays
<b>Meeting Time:</b>	3:35 - 5:30 PM
<b>Meeting Place:</b>	Mayo 3-100
<b>Instructor:</b>	Dr. Ruby H.N. Nguyen
<b>Office Address:</b>	Suite 300, West Bank Office Building, 1300 S. 2nd Street, Minneapolis
<b>Office Phone:</b>	612-626-7559
<b>Fax:</b>	612-624-0315
<b>E-mail:</b>	nguyen@umn.edu
<b>Office Hours:</b>	Thursdays, 2:15 – 3:15 p.m. in SPH Student Services, Mayo A395, and by appointment
<b>Teaching Assistant:</b>	Ainslee Neu
<b>E-mail:</b>	neuxx050@umn.edu

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### 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 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.

## 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 at least 24-hours prior to the lecture from 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>).

For guest lectures, the first 1.0 – 1.5 hours will be the guest lecture then followed by student questions and discussion. After the short break, the remaining one hour or so will be spent on theoretically dissecting and discussing a relevant published epidemiologic article. Students will be required to retrieve the article via PubMed using search terms provided by Dr. Nguyen, then after retrieving the article, read the article, and be prepared to discuss it.

### Communicating with Professor Nguyen

Email is the best and most effective way to communicate with Dr. Nguyen ([nguyen@umn.edu](mailto: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 **September 17th and November 12th**. (Note cards will be provided for attendance and to write down your question.)

### **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 **October 8th**. The second exercise will be due on **November 19th**. 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, **October 1<sup>st</sup>** and **December 3<sup>rd</sup>**. Each will be worth 10% of a student's grade. Each quiz will last 50 minutes 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 **October 29th** 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, December 10th, 2015. The final exam must be submitted no later than the scheduled final exam date and time of **Saturday, December 19th, 2015 before 10:30 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 CoursEval: [www.sph.umn.edu/courseval](http://www.sph.umn.edu/courseval). 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](http://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](http://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](http://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](http://onestop.umn.edu).

### **Course Withdrawal**

Students should refer to the Refund and Drop/Add Deadlines for the particular term at [onestop.umn.edu](http://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](mailto: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](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](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](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 September 17<sup>th</sup> 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., Fall 2015

**WEEK 1 - September 10: What is epidemiology?**

We will also review the syllabus and class schedule

Lecture: Defining epidemiology, and describing sources of data

Reading: Chapter 1, 3

Homework Assignment: Complete Review Questions for Chapter 3

**WEEK 2 - September 17: Special guest lecture on a common source of data**

“Promises & Pitfalls of Electronic Health Data” by Dr. Julian Wolfson

Reconvene in the classroom at 5 PM for discussion

Reading: Chapter 4

Homework Assignment: Complete Review Questions for Chapter 4

**WEEK 3 - September 24: How do we track diseases and identify epidemics?**

Lecture: Surveillance; incidence; prevalence; outbreak investigation

Reading: Chapter 2

Homework Assignment: Complete Review Questions for Chapter 2

**EXERCISE 1 assigned**

**WEEK 4 - October 1: How do diseases change over time?**

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

Reading: Chapter 6

Homework Assignment: Complete Review Questions for Chapter 6

**QUIZ 1 (covering Weeks 1 – 3)**

**WEEK 5 - October 8: Are there ways to experiment in epidemiology?**

Design and interpretation of randomized clinical trials

Reading: Chapters 7 & 8

Homework Assignment: Complete Review Questions for Chapter 7 & 8

**EXERCISE 1 due at the beginning of class**

**WEEK 6 - October 15: 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

Homework Assignment: Complete Review Questions for Chapters 9, 10 & 13

**WEEK 7 - October 22: 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.

Homework Assignment: Study for the Midterm Exam

**WEEK 8 - October 29: MIDTERM EXAM**

**WEEK 9 - November 5th: Are exposures and outcomes associated?**

Absolute risk; relative risk; odds ratio; (public health) attributable risk; interpretation of risk estimates

Reading: Chapters 11 & 12

Homework Assignment: Complete Review Questions for Chapters 11 & 12

**WEEK 10 - November 12: What is the epidemiology of reproductive health issues among incarcerated women?**

Special guest lecture: Dr. Rebecca Schlafer Nealy, Mayo Auditorium

Reconvene at 5 PM for discussion and **distribution of EXERCISE 2**

**WEEK 11 – November 19: What conclusions can we make from epidemiology studies?**

Lecture: Making Inferences from Epidemiologic Studies and Validity & Reliability; Criteria for causation with a critical eye on assessing the quality of the data we use for causation.

Reading: Chapters 5 & 14; chapter 15 is interesting but not necessary reading

Homework Assignment: Complete Review Questions for Chapters 5 & 14; study for QUIZ 2

**EXERCISE 2 due at the beginning of class**

**WEEK 12 - November 26th:** Thanksgiving Break - No Class

**WEEK 13 - December 3: What is big data?**

Lecture: Guest lecture by Dr. Doug Wholley

Reading: Distributed on November 19th

Homework Assignment: None

**QUIZ 2 (covering Weeks 9 – 11)**

**WEEK 14 - December 10: Pulling it all together**

Lecture: A review of the semester and an introduction to possible next steps in your potential epidemiology career

**TAKE-HOME FINAL EXAM POSTED TO MOODLE**

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

**10:30 a.m. Central Time, SATURDAY, December 19, 2015**

## GRADE AND ASSIGNMENT SUMMARY

Assignment	Due Date	Points	% of Grade
QUIZ 1	October 1	100	10%
EXERCISE 1	October 8	100	10%
MIDTERM	October 29	250	25%
EXERCISE 2	November 19	100	10%
QUIZ 2	December 3	100	10%
FINAL EXAM	December 19	250	25%
Class Participation	TBA	100	10%
<b>Total</b>		<b>1,000</b>	<b>100%</b>

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