

EPID 600




Principles of Epidemiology for Public Health

Department of Epidemiology, UNC Gillings School of Global Public Health

Summer 2016 Syllabus, Sections 071 and 01W (online, 3 credit hours)

Live meetings (optional, recorded) most Monday evenings at 8:00pm EDT

Please note: The professor reserves the right to make changes to the syllabus and schedule, including due dates and test dates. These changes will be announced as early as possible.

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<https://www.linkedin.com/in/victorschoenbach>  <https://www.facebook.com/victor.schoenbach> 
https://www.youtube.com/channel/UC8phyT1CM4O8N7YJ_cwmtMg 
Email: vjs@unc.edu
Telephone: 919-966-7436
Office Hours: By Appointment
TAs: Pawinee Doung-njern, Jen Lee (TA email addresses are in Sakai.)

Course Overview

Public health practitioners and researchers, regardless of their discipline or specialty, rely on the results of epidemiologic research and often employ epidemiologic concepts, methods, and perspectives. Clinicians providing evidence-based health care do as well. EPID600 provides a general introduction to the approach, concepts, methods, and perspectives of epidemiology for students and practitioners in a broad range of public health and related disciplines. EPID600 employs problem-based learning where you apply the epidemiologic approach to a variety of current public health questions. Through EPID600 you will improve your ability to think analytically and to understand and interpret population-based and clinical research.

Learning Objectives and ASPH Competencies

The course is designed to assist students achieve the discipline-specific competencies for Epidemiology in the core Masters of Public Health (MPH) competencies developed by the Association of Schools of Public Health (ASPH) Education Committee (see www.asph.org/userfiles/version2.3.pdf). After completing the course, students should be able to:

- Explain the population perspective, access key sources of demographic and public health data for countries around the world, and describe the magnitude, population distribution, and time trends of public health problems in the U.S. and internationally.
- Discuss, apply, and interpret basic epidemiologic concepts and measures of disease occurrence in populations: incidence, prevalence, relative risk, attributable risk, standardization.
- Use basic methods for investigating an outbreak of a health problem in a community, making use of the concepts of disease variation in time, person and place.
- Explain the relative strengths and limitations of epidemiological strategies (e.g., cohort, case-control, cross-sectional, ecological and intervention studies) for studying associations between risk factors or exposures in populations and rates of disease occurrence or death.
- Identify the major sources of random and non-random error in community and multinational health studies and suggest strategies to reduce error.
- Evaluate epidemiologic evidence by applying criteria for causal inference to information about an association between a population exposure and health outcome.
- Use epidemiologic methods in evaluating effectiveness of public health intervention programs in varying geopolitical contexts.
- Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data in different cultures.
- Appreciate some of the complexities in applying scientific evidence on health and disease to the making of public policy in diverse societies.

Getting Started

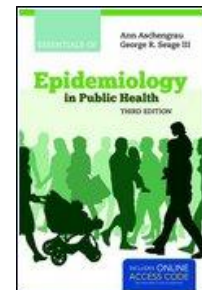
Course materials

Because this course is taught completely online, your most essential course materials are an up-to-date computer, with suitable and Internet access. Please verify that your computing infrastructure and personal proficiency in using it are adequate for taking an online course involving viewing media, downloading large Powerpoint files, submitting webforms, working in Sakai forums, and performing spreadsheet calculations (note that actual programming skills are not required for this course). Please see the technical requirements and recommendations for online courses at the UNC Gillings School of Global Public Health:

http://courses.sph.unc.edu/sakai_orientation/?page=tech

The textbook is Aschengrau, Ann, and George R. Seage, III. *Essentials of epidemiology in public health*. Jones and Bartlett, 2nd or 3rd edition (Vic has

posted some comments on the textbook at www.unc.edu/epid600/textbook/). If you purchase the 1st edition, please be sure to read Vic's comments and to compare it with the 2nd edition, which among other changes has an additional chapter. All course materials except the textbook can be accessed through the course pages in Sakai (<https://sakai.unc.edu>). You will need to login with your Onyen and password (see <http://onyen.unc.edu/> for



information about these). There is also an open website with materials from previous semesters.

Quantitative and computing skills

You are expected to be proficient in basic mathematics (e.g., through pre-calculus). A quantitative skills test will be provided so you can assess your math readiness. A list of Internet resources is available at www.unc.edu/epid600/#otherresources. You are also expected to have at least basic proficiency in MS Excel. If you have not used Excel, there are numerous books and Internet sites you can learn from (e.g., Google “learn Excel”).



Writing skills

Strong writing skills are invaluable in both academia and the workplace. Your responses to assignments should be well-organized, clear, concise and free from grammatical and typographical errors. Graders may deduct up to 20% from the available points for answers with deficiencies in English expression. The UNC Writing Center (writingcenter.unc.edu) has many excellent resources available online or through personalized consultation.

Course Structure

You will be assigned to a teaching assistant (TA) and a small group at the beginning of the second week of the semester. You can work with your small group members on the case studies, though each student should write up her/his own answers. When you submit your answers you will receive a confirmation email with the instructor answers (which will also go in Sakai), so you can evaluate yours. Your TA will review your answers to judge your level of effort.



A weekly lecture is provided as a set of Powerpoint slides with verbatim speaker notes and/or as a videorecorded lecture presented to the classroom course in a previous semester. Students may read or listen to the lecture.



Course Modules

The summer course has 12 modules, listed below. Modules last a week and include textbook chapter(s), lecture, case study reading(s), a quiz, and case study questions that will challenge you to apply the concepts you are learning as you analyze the reading. The modules are:

- I. Basic concepts: Epidemiology and public health
- II. Basic concepts: Investigating disease outbreaks
- III. Basic concepts: Studying populations
- IV. Basic concepts: Measuring disease; incidence and prevalence
- V. Basic concepts: Disease natural history; population screening
- VI. Strategies: Intervention trials
- VII. Strategies: Cohort studies
- VIII. Strategies: Case-control studies
- IX. Interpretation: Selection bias, information bias
- X. Interpretation: Confounding

- XI. Interpretation: Data analysis and interpretation
- XII. Interpretation: Broader perspectives

Resources

Textbook: Aschengrau and Seage (see “Getting Started”, above, for full citation)

Sakai Web Portal, sakai.unc.edu (has links to lecture slides, readings, case studies, examinations).

Readings: Reading assignments, including textbook chapters, articles, and other materials will be listed within each module’s instructions.

Course Requirements

As a student in EPID600, you are required to submit answers to: (a) **Case studies 01 and 12** (which are mostly survey questions), (b) **Weekly Quizzes**, (c) the **Final examination**, according to the due dates listed in the course schedule. The quizzes and examinations are **open-book and timed**. Some of the case studies use special EPID600 webforms linked in Sakai.

You are also requested to submit four evaluation forms: (a) anonymous TA evaluation, (b) peer evaluation #1, (c) peer evaluation #2, (d) anonymous course evaluation. Links to the TA and peer evaluations will be placed in Sakai. The anonymous course evaluation is conducted by the school; you will receive an email with the link to the webform. To recognize the time and effort involved in submitting evaluations, up to five points of the overall course grade are awarded for submitting these evaluations.

You will be assigned to a small group of 4-6 students so you can work collaboratively on the case studies. We expect you to discuss your answers, change them as you see fit, and then submit your answers individually.

The course is designed to require about 9.5 hours/week over 12 weeks, or approximately 114 hours (12 lectures @ 2 hrs + 17 chapters @ 1.5 hrs + 11 case studies @ 5 hrs + 10 quizzes @ 0.5 hr + 2-hr final exam + 2 hrs for evaluation forms) to meet the UNC standard for a 3-credit course (registrar.unc.edu/academic-services/policies-procedures/university-policy-memorandums/upm-29-definition-of-a-credit-hour/). The total does not include the live meetings, which are optional.

Course Policies & Procedures

UNC email policy

Per UNC email policy, all course-related communications will be sent via your official UNC email address as listed in Sakai. It is your responsibility to ensure that you receive and read, in a timely manner, emails sent by EPID600 to your UNC email address. “Broadcast” emails (those sent to the entire class) will be archived in Sakai, so that you can verify that you



Campus Policies and Procedures

are receiving them. Individually-sent emails will not necessarily be archived in Sakai. Please send all course-related emails to your TA with a copy to me, and include your full name and small group number.

Procedure for Appealing a Score on an Assignment

If you feel you have received an incorrect score on an assignment, please raise the matter first with your TA by email and (copy me). Please include the following information:

- Specify with full detail which questions and assignment (i.e., case study #, examination #)
- Include the question, the instructor answer, and the answer you gave
- Include any feedback you have received so far
- Explain why you believe your answer deserves more credit

Late Work Policy

Late quizzes and case studies may incur late penalties. Extensions will only be granted in cases of illness, family illness, or other extenuating circumstances. The final examination is given in compliance with UNC final exam regulations (www.unc.edu/ugradbulletin/procedures1.html#final_exams).

Evaluation

Your final grade will be calculated as follows:

Quizzes (average of highest 9 scores)	35%
Final Examination	30%
Case studies	20%
Small group participation	10%
Evaluations	5%

* Small group participation is evaluated by the other members of your small group.

Grading Scale – graduate students

H: Completion of course with a total score of 93% or greater

P: Completion of course with a total score of 65% - 92%

L: Completion of course with a total score of 55% - 64%

F: Students who achieve less than 55% in their course work will receive an F grade.

Grading Scale – undergraduate students

A: Completion of course with a total score of 90% or greater (90-93% = A-)

B: Completion of course with a total score of 75% - 89% (75-79 = B-, 85-89 = B+)

C: Completion of course with a total score of 60% - 74% (60-64 = C-, 70-74 = C+)

D: Completion of course with a total score of 55% - 59%

F: Students who achieve less than 55% in their course work will receive an F grade.

The Quizzes, Final Examination, and Case Studies 1 and 12 must have been submitted for you to receive a grade. Students who do not submit the Final Examination will receive an F, unless they withdraw from the course by the Registrar's deadline. In exceptional circumstances a grade of IN (incomplete) or AB (absent from the final examination) may be given. Please read the applicable University policies and policies for your program, or consult your program registrar. **Note that the withdrawal deadline for the summer session comes early.**

Letters of Recommendation

Should you need a letter of recommendation, please send an email to Vic with a subject line beginning "EPID600 recommendation request" and include the deadline for the recommendation and the other information he will need. Also, ask your TA to send a short paragraph for inclusion. (See the example EPID600 recommendation letter at www.unc.edu/epid600/students/)

UNC Honor Code

The *Honor Code* and the *Campus Code*, embodying the ideals of academic honesty, integrity, and responsible citizenship, have for over 100 years governed the performance of all academic work and student conduct at the University of North Carolina at Chapel Hill. Acceptance by a student of enrollment in the University presupposes a commitment to the principles embodied in these codes and a respect for this most significant University tradition. Your participation in this course comes with our expectation that your work will be completed in full observance of the *Honor Code*. Academic dishonesty in any form is unacceptable, because any breach in academic integrity strikes destructively at the University's life and work. If you have any questions about your or our responsibility under the Honor System, please visit the Honor System website (honor.unc.edu) and/or consult with someone in the Office of the Student Attorney General, the Office of the Dean of Students, and/or the EPID600 instructors.

EPID600 fully supports the Honor System at Carolina. We ask you to help by (a) following the instructions that accompany assignments for graded work and (b) reporting possible infractions to the instructors. The Honor System is a precious resource that enables freer and more collegial interactions between students and faculty. We all benefit from its vitality.

Of the thousands of students who have taken EPID600, the overwhelming majority have followed the instructions in respect to permitted collaboration. However, over the years we have had to refer some two dozen students to the Honor System, exposing them to possibly serious penalties (e.g., suspension, loss of financial aid). These instances typically involved students knowingly violating the rules for collaboration (see below), often because their thinking became clouded by anxiety. As a point of fact, the risk of failing EPID600 is much lower than the risk that one's evading the *Honor Code* will be detected. EPID600 can be challenging, but if you have difficulty to the point where you would even imagine violating the *Honor Code*, **please** ask Vic for help. There are **always** better alternatives.

The rules for complying with the *Honor Code* in EPID600 are simple:

1. **You must not communicate about a quiz or examination with anyone other than a current EPID600 instructor until Vic or the TA has distributed the instructor answers.** For open-book quizzes and exams, you may use textbooks, course lectures, case study instructor answers already posted in Sakai, as well as publications, and material on public websites.
2. **You may not have access to instructor answers to case studies** (e.g., from prior semesters) before these answers have been provided by the current instructors. However, you may work with others, including students who have taken the course previously, as long as they do not give you access to instructor answers.
3. Follow guidelines about using the work of others, i.e., do not plagiarize (the Health Sciences Library has a tutorial on plagiarism and citing sources, www.hsl.unc.edu/services/tutorials/PlagiarismTutorial/intro.html). Quotations, with proper citations, do not violate the Honor Code; however, extensive quotation does not demonstrate your understanding of the material.

Important UNC policies concerning use of online resources

1. By enrolling as a student in this course, you agree to abide by the University of North Carolina at Chapel Hill policies related to the Acceptable Use of online resources. Please consult the Acceptable Use Policy (<http://help.unc.edu/1672>) on topics such as copyright, net-etiquette and privacy protection.
2. As part of this course you may be asked to participate in online discussions or other online activities that may include personal information about you or other students in the course. Please be respectful of the rights and protection of other participants under the UNC Chapel Hill Information Security Policies (http://its.unc.edu/ITS/about_its/its_policies/index.htm) when participating in online classes.
3. When using online resources offered by organizations not affiliated with UNC Chapel Hill, such as Google or Youtube, please note that the Terms and Conditions of these companies and not the University's Terms and Conditions apply. These third parties may offer different degrees of privacy protection and access rights to online content. You should be well aware of this when posting content to sites not managed by UNC Chapel Hill.
4. When links to sites outside of the unc.edu domain are inserted in class discussions, please be mindful that clicking on sites not affiliated with UNC-Chapel Hill may pose a risk for your computer due to the possible presence of malware on such sites.

Valuing, Recognizing, and Encouraging Diversity

Promoting and valuing diversity in the classroom enriches learning and broadens everyone's perspectives. Inclusion and tolerance can lead to respect for others and their opinions, which is

valuable in itself and is critical to maximizing the learning that occurs in this course. Other peoples' views may challenge our own closely held ideas and personal comfort zones. However, learning to understand and appreciate views different from our own can create a sense of community and promote excellence in the learning environment.

Diversity includes consideration of (1) the variety of life experiences others have had, and (2) factors related to "diversity of presence," including, among others, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, and social position.

This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

Course Feedback and Evaluation

Significant changes have been made to many aspects of EPID600 during the past several semesters, in an effort to increase student learning and satisfaction. Your feedback is welcome at any time as well as on the final (anonymous) course evaluation. As you will see from previous evaluation comments (www.unc.edu/epid600/students#allcomments), student preferences are diverse. Although our flexibility is somewhat limited by the size and diversity of the class, we want your experience to be as productive and enjoyable as possible.

The Department of Epidemiology participates in the Carolina Course Evaluation System (CES), the University's online course evaluation tool, enabled at the end of each semester. Your responses will be anonymous, with feedback provided in the aggregate; open-ended comments will be shared with instructors, but not identified with individual students. Although most comments are not made public, if you do not wish your comments to be shared publicly, please state that in your comment. Your participation in CES is a course expectation, as providing constructive feedback is a professional expectation. Such feedback is critical to improving the quality of our courses, as well as providing input to the assessment of your instructors.

Words to the Wise

- Please save a copy of your responses to all assignments before you submit them electronically and retain the copy or confirmation email. Although fortunately rare, webform submissions and/or emails are occasionally erased or otherwise lost.
 - If you need help, please do not hesitate to ask your TA for assistance. Also, campus librarians are available to help you locate information for this course.
 - Please don't wait until the very end of a module to complete the case study. These assignments will take some time to complete.
 - Should unforeseen events or life/work commitments occur during the semester which will impact your course work, please let your TA (and the instructor) know as soon as possible.
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Frequently asked questions

How can I contact my TA or the instructor?

You will see your TA in lab most weeks of the semester. The TAs and the instructor can also be contacted by email (recommended) or by phone. Contact information can be found in the Staff Information area of Sakai or at directory.unc.edu. The following practices are appreciated for emails: begin the Subject line "EPID600," begin "Dear ____ (and Vic)" (____ is your TA's name), sign with your first and last name, and send to your TA with a copy to Vic.

What should I do if I have a question regarding the course content or an assignment?

Please email your TA and copy Vic. If we cannot resolve your questions via e-mail, then we can communicate by telephone or in person.

What should I do if something is wrong with my computer or Sakai?

- If the problem is course specific:
 1. Email your TA and copy Vic.
 2. Begin the subject of the email with: EPID600 TECHNICAL HELP and your problem will be addressed as soon as possible.
- (ONLY) If you are experiencing a general computer problem:
 1. Call 919-962-HELP 24 hours 7 days a week for help.
 2. Be sure to also let your instructor or TA know you are having technical issues.

Where can I look to find out my course grade?

At the end of each semester, you may check your grades on <http://connectcarolina.unc.edu/>. Login to the site using your Onyen and password. Then, click the "Go" button next to grades for the semester you want to view. It may take up to three weeks after you have completed the course before grades will appear in Student Central. Your TA can tell you how to project your course grade.

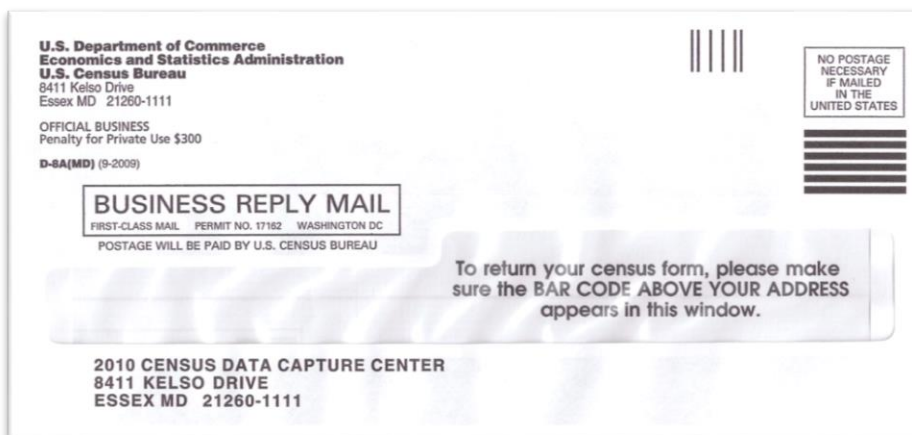
How do I go about dropping this course?

From time to time, students find it necessary to drop this course. If you think you may need to drop, please communicate with the instructor about your situation and consult with the student services staff for your program about the procedure. Depending on when you chose to drop the course, you may or may not receive a full or partial refund of your tuition – or not be permitted to drop. Therefore, be sure to pay close attention to the official drop dates and tuition refund schedules on the Registrar's website (registrar.unc.edu). The summer course has very early deadlines.

What if it's too late to drop the course?

Tell your TA and the instructor if you think you will not be able to finish the course on time.

What if I am having a problem with my TA?



U.S. Department of Commerce
Economics and Statistics Administration
U.S. Census Bureau
8411 Kelso Drive
Essex MD 21260-1111

OFFICIAL BUSINESS
Penalty for Private Use \$300

D-8A(MD) (9-2009)

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 17182 WASHINGTON DC
POSTAGE WILL BE PAID BY U.S. CENSUS BUREAU

To return your census form, please make
sure the BAR CODE ABOVE YOUR ADDRESS
appears in this window.

2010 CENSUS DATA CAPTURE CENTER
8411 KELSO DRIVE
ESSEX MD 21260-1111

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

If you have any concerns with the performance of your TA, please contact the instructor as soon as possible.

12/16,17/2015, 5/8/2016