

School of Population and Public Health
SPPH 503 – Epidemiologic Methods II
Winter 2021

Course dates: January 12, 2021 to April 29, 2021
Time: Tuesdays and Thursdays from 13:00 to 14:30
Location: Online via Zoom
Instructor: Amee R. Manges, MPH, PhD
Instructor office hours: Friday 1-2pm online via Zoom

Prerequisites

SPPH 502 (Introduction to Epidemiology); SPPH 400 (Statistics for Health Research)

Contact information

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Teaching assistants

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Course description

This is a second level (intermediate) epidemiologic methods course. The goal of the course will be to expand student knowledge in epidemiologic methods and to develop professional skills in epidemiology. Topics covered will include study design, causal inference, confounding, effect measure modification, analysis of biases, and elements of data analyses. The emphasis of this course will be to reinforce and extend student knowledge in epidemiologic methods and facilitate the practical application and mastery of this knowledge.

Learning objectives

Appreciate approaches to causal inference in epidemiology
Apply study design principles to research questions in epidemiology
Understand, identify and quantitatively evaluate major sources of bias in epidemiologic studies
Master basic techniques for analyzing epidemiologic data

Course materials and readings

Szklo M, Nieto FJ. Epidemiology: Beyond the Basics (4th Edition). Burlington, MA: Jones & Bartlett, 2018 is the required text. The textbook can be purchased at the UBC Bookstore, but copies are usually available from on-line vendors. Students should consult the course website regularly for announcements. The required textbook can be purchased at the UBC Bookstore, but copies are

usually available from on-line vendors. The complete course schedule, including non-textbook required readings and supplementary readings via pdf files or URLs linked to full-text files, all homework assignments (and solutions), statistical software sites, reference materials and other web-based tools or resources are provided on the Canvas course website.

Statistical computing resources

<http://cran.r-project.org/> (download R)

<http://www.rstudio.com/> (download RStudio)

Methods of evaluation

Four homework assignments (40%)

In-class exercises (5%)

Pre-class quizzes (5%)

Mid-term exam (20%)

Final exam (30%)

Homework assignments

The homework assignments for the course are very important. These assignments allow you to integrate and practice your epidemiology skills. Some homework assignments will require the analysis of data. We recommend you use R, but you can use other statistical programs, although we will not be able to provide support for any other statistical programs. You may work together on the assignments, but each person must submit their own work. The assignments should be submitted to the Canvas website at 5pm on the date they are due. **Late assignments are penalized 10% per day and a zero will be assigned if the work is submitted after the solutions become available.** If you feel there has been error in marking either an assignment or an exam, please bring your concern to our attention. However, be aware that an entire assignment or exam may be reviewed and points may be awarded OR subtracted from the total.

Course format and expectations

Classes will consist of lectures, seminar style discussion (large and small group) and in-class problem-solving; hence attendance will be very important. Students are expected to actively participate. Students are expected to complete the required textbook and non-textbook readings and pre-class quizzes prior to class. TA and instructor office hours will be available. The purpose of office hours is to provide additional support for students and to provide more time to work through problems (not from the homework).

Online teaching for 2021

During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad, you will be subject to the laws of your local jurisdiction, and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom, but has no control over foreign authorities (please visit <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0> for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). Thus, we recognize that

students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks, until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit:

<http://academic.ubc.ca/support-resources/freedom-expression>

To accommodate remote learning and students in other time zones, recordings of lectures will be posted and made available on the Canvas course website. These recordings are for your use only and should not be distributed or posted publicly.

Academic integrity

A detailed description of academic integrity, including the University's policies and procedures around violations of academic integrity and honesty may be found in the Academic Calendar. Please ensure that the work you turn in (homework, exams and other assignments) represents your own work.

<http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0>.

University policies

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website.

Acknowledgement

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəyəm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.