

## SOC 3673-90 Social Epidemiology

Summer Semester 2021 (Online)

**Instructor: Ming Wen**, Ph.D., Professor and Chair of the Department of Sociology

Email: Canvas mail is the best way to communicate with the instructor.

Office Hours via Zoom: by appointment

**Teaching Assistant (TA): Mindy Steadman**, M.P.H., Ph.D. student in Sociology

Email: [mindy.steadman@soc.utah.edu](mailto:mindy.steadman@soc.utah.edu) or Canvas mail are the best ways to communicate with the TA.

Office hours via Zoom: Tuesdays 7-8 p.m. and Fridays 9-10 a.m.; Additional office hours can be scheduled by appointment.

The instructor and TA will make efforts to respond email messages within 24 hours except on weekends or public holidays.

### Required Readings

*Gordis Epidemiology, 6<sup>th</sup> edition*. 2019, authors Celentano and Szklo. Elsevier. The inclusive access to this textbook is available via Canvas. The price for the electronic access is \$35.30 to students (Ebook 9780323552295). Please carefully read the following note from the University Book Store regarding this inclusive access program:

“**The inclusive access program** provides students a digital copy of the book at a discounted price they pay for with their tuition. Students are provided the book on the first day of the semester, **if for any reason a student does not want the inclusive access textbook, they can opt out of the program anytime within the first two weeks of the semester**. Students do receive about three emails telling them about inclusive access and how to access the textbook or opt out of the program. For more information please see the information I included from our website.”

Additional articles to read are posted on the course website via Canvas under the weekly module.

### Course Description

Epidemiology is the study of how diseases are distributed in populations and the factors that influence or determine this distribution. Epidemiology is the basic science of public health, a quantitative field that draws on statistical methods. Epidemiologists design studies to learn about disease causes and distributions. Using a variety of teaching and assessment methods, we will cover topics such as how exposure to a factor affects health, how disease spreads across a population, and how public health interventions can help control or reduce the spread of disease. We will explore the various types of research methods used in epidemiology, as well as how to statistically identify the risk factors or causes of disease. We will also watch films and read published articles to further understand social epidemiology as social science, addressing the ways in which social, political, cultural, and economic circumstances influence our chances for a healthy life. This course fulfills the Quantitative Reasoning (QB) or Quantitative Intensive (QI) requirement of the University of Utah. You need to have a basic knowledge and understanding of algebra and elementary statistics before taking this course.

## Course Learning Outcomes

By the end of this course, you will be able to:

- understand what epidemiology is and know its contributions to public health and medicine
- calculate, interpret, and compare various measures of morbidity, mortality, survival, and measures of disease-exposure associations
- identify questions that can be answered with epidemiological studies
- understand the defining features of different epidemiologic study designs and their strengths and limitations
- understand the complexity and importance of social factors in forming social disparity in health outcomes

## Assignments and Grading

- Quizzes (30%)
  - due at 11:59 PM every Sunday
  - timed, open-book, open-source, taken on Canvas
  - no student collaboration allowed
  - lowest quiz score dropped
- Homework assignments (20%)
  - due at 11:59 PM every Friday; answer key posted by Saturday noon
  - graded based on the accuracy
  - can be submitted as an individual or a group assignment
  - lowest homework score dropped
- Short write-ups (20%)
  - minimum of 350 words and a maximum of 500 words
- Final exam (30%)
  - timed, **cumulative**, open-book, open-source, taken on Canvas
  - no student collaboration allowed
- Extra credit opportunities
  - submit an epidemiological study proposal and earn extra exam points (see description below)
  - participate in discussion board and earn extra quiz points
- Your final letter grade will be given based on your total numerical score (rounded to the nearest integer) after all the grade components are taken into account and will be curved according to the class performance. The goal is to have a median grade around B+.

## Extra Credit Study Proposal

Toward the end of the semester, you may submit a study proposal to earn up to 15 extra points on your overall exam scores. You are encouraged to work in a group of no more than 3 students on this assignment. You may also work alone.

Pose a specific hypothesis or study question related to the distribution, determinants, or outcomes of health or disease states. Present a study design abstract that is no more than 800 words (excluding references) and includes six sections: (1) the study question and hypothesis; (2) a one-paragraph literature review referencing 3-5 papers that established the scientific premise for your study question and the need for your study to fill a gap in prior knowledge; (3) type of study design, which needs to be a design covered in the course (randomized trial, other experimental design, cohort study, case-control study, cross-sectional study, ecological study); (4) methods: study population, data collection strategy, data collected, statistical data analysis plan; (5) the key measures you would be calculated from the data in order to answer your study question; (6) limitations and potential biases in your study; and (7)

how your study will help fill the knowledge gap you have identified through your literature review. Including a sample size or power calculation is optional but will strengthen the proposal. Use APA as the reference and citation style (needs to be consistent throughout the proposal).

If you choose to do this project, you may email your study question and choice of study design to the instructor via Canvas mail any time prior to 6/21 for comments. Indicate "epidemiology project" on the subject line.

### **Materials Posted on Canvas**

This class can be "attended" from wherever there is a functioning Internet connection. In each week's module, a weekly message outlining the topics covered and assignments required in that week will be posted and all the course materials are posted. All the assignments will need to be submitted on Canvas. Competence in using an Internet browser and Canvas is necessary to effectively take this class. You will also need a basic calculator for homework and the first three exams.

### **Rules**

You may and are encouraged to work in groups of no more than three students for the homework problem sets and the optional extra credit proposal, and turn in a single assignment with all of the names. You may also work alone, although epidemiologists usually do form collaborative groups to plan studies. A discussion board will be set up on Canvas to help students find assignment partners if they would like to, which we appreciate may be challenging given the remote format. The assignments' due dates are listed in the schedule below and in the corresponding modules on Canvas as well. There will be no credit for late work. The deadlines are in the Utah times. The only exception to this is for quizzes and short write-ups when a reason for the late assignment has been sent to the TA or the instructor before the day that the assignment is due (before midnight), and the instructor has approved the reason. No late homework assignments are accepted regardless of the reasons (because the answer key is posted next Monday morning).

### **Expectations for Behavior**

Please check your Canvas email and course site each week on a regular basis. Students may find it helpful to turn on notifications (Account -> Notifications -> Select Notification Method). Please review all posted materials, complete all assigned readings, and submit assignments via Canvas on time. Please do not ask questions that are clearly addressed in the syllabus or course announcements. Please treat your classmates with the professionalism and courtesy you would expect in the workplace. All course communications should be polite and respectful. All course communications should use standard grammar, punctuation, and capitalization (e.g., never use all caps).

### **University Policies**

1. *The Americans with Disabilities Act*. The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability & Access (CDA), 162 Olpin Union Building, (801) 581-5020. Due to COVID-19, CDA processes and procedures have been modified to account for the closure of campus offices and transition to online learning. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the CDA.

2. *University Safety Statement.* The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu).
3. *Addressing Sexual Misconduct.* Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).
4. *COVID-19 Campus Guidelines.* Students are required to self-report if they test positive for COVID-19. To report, please contact:  
COVID-19 Central @ The U  
801-213-2874  
[coronavirus.utah.edu](http://coronavirus.utah.edu)

To reduce the spread of COVID-19 on campus, face coverings are required in all in-person classes for both students and faculty.

Based on CDC guidelines, the University requires everyone to wear face coverings in shared public spaces on campus. If you repeatedly fail to wear a face-covering in class, you may be referred to the Dean of Students for a possible violation of the Student Code.

Some courses may require attendance due to hands-on coursework. Please read the syllabus and attendance requirements for the course thoroughly.

Some students may qualify for accommodations & exemptions from these guidelines through the Americans with Disabilities Act (ADA). Accommodations should be obtained prior to the first day of class.

If you believe you meet these criteria, contact:

Center for Disability & Access  
801-581-5020  
[disability.utah.edu](http://disability.utah.edu)  
162 Union Building  
200 S. Central Campus Dr.  
Salt Lake City, UT 84112

## Course Schedule

WEEK	TOPIC/READING	ASSIGNMENTS
5/17	Course Introduction and Syllabus/Schedule Review Ch 1 – Introduction Ch 2 – The Dynamics of Disease Transmission Film – “Journey to Planet Earth: Hot Zones”	Homework 1 due at 11:59 PM, May 21, Friday Quiz 1 due at 11:59 PM, May 23, Sunday Write-up 1 due at 11:59 PM, May 23, Sunday Extra credit discussion board open
5/24	Ch 3 – Morbidity Measures Ch 4 – Mortality Measures Film – “We Heard the Bells – The Influenza of 1918” Film – “Coronavirus: Race Against Pandemic?” Seminar video – “Structural Racism & the COVID-19 Pandemic” (a conversation with Dr. Tyson Brown, Associate Professor of Sociology at Duke University)	Homework 2 due at 11:59 PM, May 28, Friday Quiz 2 due at 11:59 PM, May 30, Sunday Write-up 2 due at 11:59 PM, May 30, Sunday
5/31	Ch 7 – Observational Studies Ch 8 – Cohort Studies Ch 9 – Comparing Cohort and Case-Control Studies Ch 10 & Ch 11 – Randomized Trials I & II Film – “Epidemiology: Linking Smoking and Lung Cancer” Film – “The Great Leveller”	Homework 3 due at 11:59 PM, June 4, Friday Quiz 3 due at 11:59 PM, June 6, Sunday Write-up 3 due at 11:59 PM, June 6, Sunday
6/7	Ch 5 – Diagnostic and Screening Tests Ch 6 – The Natural History of Disease Ch 12 – Estimating Risk Ch 13 – More on Risk	Homework 4 due at 11:59 PM, June 11, Friday Quiz 4 due at 11:59 PM, June 13, Sunday No write-up due
6/14	Ch 14 – From Association to Causation Ch 15 – More on Causation Ch 16 – Genetic and Environmental Factors in Disease Causation Film – “Living Old” Film – “Preventing Dementia”	Homework 5 due at 11:59 PM, June 18, Friday Quiz 5 due at 11:59 PM, June 20, Sunday Write-up 4 due at 11:59 PM, June 20, Sunday
6/21	Grundy & Glaser (2000) Syme & Yen (2000) Berkman & Kawachi (2000) <i>(This is the final week)</i>	Write-up 5 due at 11:59 PM, June 24 Final exam available from June 24 through June 27 Extra credit proposal due at 11:59 PM, June 27 Extra credit discussion board close at 11:59 PM, June 27

*Please note that the syllabus may be modified with reasonable notice to you.*