

Department of Epidemiology and Biostatistics

Epidemiology 9551A

Foundations of Epidemiology

Fall 2021

1. Technical Requirements:



Stable internet connection



Laptop or computer



Access to course OWL site



Access to Schulich Remote Desktop Services (RDS)

2. Course Overview and Important Dates:



Delivery Mode	Dates	Time	Location
In Person	Mondays	9:30 to 11:30 am	PHFM 3015
	Fridays	9:30 to 10:30 am	PHFM 3015

*Details about design and delivery of the course are listed below in Section 4

Classes Start	Reading Week	Classes End	Study Day(s)	Exam Period Begins
September 10	November 1 to 5	December 8	December 9	December 10

* November 12, 2021: Last day to drop a first-term half course without academic penalty

NOTE: In the event of a COVID-19 resurgence during the course that necessitates moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at times indicates in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any remaining assessments will also be conducted online at the discretion of the instructor.

3. Contact Information



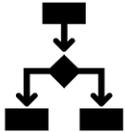
Course Instructor	Contact Information
Dr. Kelly Anderson	kelly.anderson@schulich.uwo.ca

Teaching Assistant	Contact Information
Joshua Wiener	jwiener2@uwo.ca

4. Course Description and Design

This course aims to provide a comprehensive introduction to fundamental concepts, principles, and terminology of epidemiologic research. Topics include measures of disease frequency and effect, key study designs, causation, bias, and confounding. In addition to the class sessions, students will participate in “lab” sessions where they will apply concepts learned in class to epidemiologic datasets to gain basic analytic skills.

Prerequisites: Enrollment in the graduate program in Epidemiology & Biostatistics, or permission of the course instructor.



All course material will be available through OWL: <http://owl.uwo.ca>. Any changes will be indicated on the OWL site and discussed with the class.

If students need assistance, they can seek support on the [OWL Help page](#). Alternatively, they can contact the [Western Technology Services Helpdesk](#). They can be contacted by phone at 519-661-3800 or ext. 83800.

[Google Chrome](#) or [Mozilla Firefox](#) are the preferred browsers to optimally use OWL; update your browsers frequently.

5. Learning Outcomes

Upon successful completion of this course, students will be able to:

- Describe the implications of basic causal theory for study design and analysis;
- Use epidemiological concepts to describe the distribution and determinants of disease, with consideration of person, place, and time;
- Apply measures of disease frequency to describe the extent of disease in a population;
- Compute estimates of disease effect to examine exposure-disease associations;
- Distinguish between and understand the limitations of various research designs;
- Address threats to the validity of study findings, including bias, misclassification, confounding, and effect modification.



6. Course Content and Schedule



Week	Date	Topic
1	Sept 6	Labour Day Holiday - NO CLASS
	Sept 10	Introduction to Epidemiology & Course Overview
2	Sept 13	Causal Thinking in Epidemiology
	Sept 17	<i>Lab #1: Introduction to Stata</i>
3	Sept 20	Populations and Population Health
	Sept 24	Overview of Epidemiological Study Designs
4	Sept 27	Measures of Disease Frequency
	Oct 1	<i>Lab #2: Measures of Disease Frequency</i>
5	Oct 4	Measures of Effect & Population Impact
	Oct 8	<i>Lab #3: Measures of Effect & Population Impact</i>
6	Oct 11	Thanksgiving Monday - NO CLASS
	Oct 15	Information Bias
7	Oct 18	Selection Bias
	Oct 22	<i>Tutorial: Midterm Review Session</i>
8	Oct 25	Midterm Exam
	Oct 29	Confounding I: Definition & Conceptual Issues
9	Nov 1	Fall Reading Week - NO CLASS
	Nov 5	
10	Nov 8	Confounding II: Adjustment and Control
	Nov 12	<i>Lab #4: Confounding</i>
11	Nov 15	Interaction & Effect Measure Modification
	Nov 19	<i>Lab #5: Interaction & Effect Modification</i>
12	Nov 22	Cohort Studies
	Nov 26	Cross-Sectional & Ecological Studies
13	Nov 29	Case-Control Studies
	Dec 3	Surveillance and Screening
14	Dec 6	Final Exam Review
	Dec 10	Final Exam Period – NO CLASS

Lab and tutorial sessions will be led by the course TA

7. Participation and Engagement



- Students are expected to participate and engage with the course content
- Students can participate during class and lab sessions, or by posting in the online discussion forum on OWL
- Students can also participate by interacting in the forums with their peers and instructors
- A rubric for evaluating participation is available on the course OWL page

8. Evaluation

Below is the evaluation breakdown for the course. Any deviations will be communicated.

Assessment	Weighting	Due Date
Participation	10%	N/A
Assignment #1	5%	September 24
Assignment #2	5%	October 8
Assignment #3	5%	October 22
Midterm Exam	25%	October 25
Assignment #4	5%	November 19
Assignment #5	5%	December 3
Final Exam	40%	December 13



- All assignments are submitted to OWL **by 5:00 pm** on the due date
- Exams will occur during scheduled class time
- Any requests for marking reassessment should be submitted in writing to the course instructor
- After an assessment is returned, students should wait 24 hours to digest feedback before requesting reassessment; to ensure a timely response, please reach out within 7 days

Information about late or missed evaluations:

- Please discuss an alternative deadline with the instructor in advance if you foresee difficulties meeting the assigned due dates
- Late assessments without prior approval will be subject to a late penalty (5% per day)
- An assessment cannot be submitted for grading after it has been returned to the class. In the event of extended illness, the assignment weight will be transferred to the final exam.
- If an exam is missed due to illness, a make-up date will be offered

9. Communication:



- Students are responsible for all materials posted on the course OWL page, and should check the site regularly
- This course will use the OWL forum for discussion, which will be monitored daily by the instructor and teaching assistant. Students will receive a response within 24 to 48 hours, outside of weekends and holidays.
- Please post **course-related questions to the discussion forum**, so that all students can access the answers. Emails with course-related questions will be redirected to the OWL discussion forum.

10. Office Hours:



- Office hours with the teaching assistant will be held Thursdays from 2:00 to 3:00 pm, or by appointment (email)
- Office hours with the course instructor will be held after class sessions or by appointment (email)

11. Course Resources



- Required Textbook: Weiss NS & Koepsell TD. (2014) Epidemiologic Methods: Studying the Occurrence of Illness, 2nd Edition. New York, Oxford University Press. [Available Online via UWO Library.](#)
- Optional Textbook: Porta M. (2014) A Dictionary of Epidemiology, 6th Edition. New York, Oxford University Press. [Available Online via UWO Library.](#)
- Stata/IC License (Available through Schulich Remote Desktop Services)
- Additional readings and other course materials will be posted to the weekly lesson folder on OWL

12. Professionalism & Privacy:



Western students are expected to follow the [Student Code of Conduct](#). Additionally, the following expectations and professional conduct apply to this course:

- Students are expected to follow online etiquette expectations provided on OWL
- All course materials created by the instructor(s) are copyrighted and cannot be shared
- Recordings are not permitted (audio or video) without explicit permission, and permitted recordings are not to be distributed in any format

13. How to Be Successful in this Class:

Students enrolled in this class should understand the level of autonomy and self-discipline required to be successful.



1. Invest in a planner or application to keep track of your courses. Populate all your deadlines at the start of the term and schedule time at the start of each week to get organized and manage your time.
2. Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed.
3. Connect with others. Try forming a study group and meeting on a weekly basis for study and peer support.
4. **Do not be afraid to ask questions!** If you are struggling with a topic, check the online discussion boards or contact your instructor or teaching assistant. It is always better to seek help early, rather than waiting until after an exam or assignment.
5. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.

14. Western Academic Policies and Statements

Absence from Course Commitments

[Policy on Academic Consideration for Student Absences](#)

All non-medical absences must be approved in advance. In the case of an unexpected absence on compassionate grounds, documentation may be requested. If documentation is required for either medical or non-medical academic accommodation, then such documentation must be submitted by the student to the instructor.

Academic Offenses

Scholastic offences are taken seriously, and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Accessible Education Western (AEW)

Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are encouraged to register with Accessible Education Western (AEW), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both SAS and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.

More information and access to services is available on the AEW website: http://academicsupport.uwo.ca/accessible_education/index.html

Accommodation for Religious Holidays

The policy on Accommodation for Religious Holidays can be viewed [here](#).

Copyright and Audio/Video Recording Statement

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation, or the participant has the prior written permission of the instructor. You must always ask permission to record another individual and you should never share or distribute recordings.

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws.

Correspondence Statement

The centrally administered **e-mail account** provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner. You can read about the privacy and security of the UWO email accounts [here](#).

Department & Faculty Offices

The Department of Epidemiology and Biostatistics is located on the third floor of the Western Centre for Public Health & Family Medicine (PHFM) on Western University's Main Campus.

Rounding of Marks Statement

We strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. **Final grades** on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks WILL NOT be bumped to the next grade or GPA, e.g. a 79 will NOT be bumped up to an 80, an 84 WILL NOT be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark "bumping" will be denied.

15. Support Services

As part of a successful student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western's Campus Recreation Centre. Information regarding health- and wellness-related services available to students may be found at <http://www.health.uwo.ca/>

Registrarial Services: <http://www.registrar.uwo.ca>

USC Student Support Services: <http://westernusc.ca/services/>

Academic Support and Engagement: <http://academicsupport.uwo.ca/>

SGPS Life & Community web page: https://grad.uwo.ca/life_community/self/index.html

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate or undergraduate chair), or other relevant administrators in their unit.

Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.