Clinical Epidemiology
EPIDEMIO 9562A / EPID 4320A

Fall 2023
Monday, 1:30-4:30pm
Room FNB 2220

1. Contact Information

<table>
<thead>
<tr>
<th>Course Coordinator &amp; Instructor</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Janet Martin</td>
<td><a href="mailto:jmarti83@uwo.ca">jmarti83@uwo.ca</a></td>
</tr>
</tbody>
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<tr>
<th>Teaching Assistants</th>
<th>Contact Information</th>
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<tr>
<td>TBA</td>
<td>TBA</td>
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2. Technical Requirements:
- Stable internet connection
- Laptop or computer
- Working microphone
- Working recording camera

3. Course Overview and Important Dates:

<table>
<thead>
<tr>
<th>Delivery Mode</th>
<th>Day</th>
<th>Time</th>
</tr>
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<tbody>
<tr>
<td>In-person (FNB 2220) and/or virtual delivery (for selected classes)</td>
<td>Mondays</td>
<td>1:30pm to 4:30pm</td>
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4. Course Description and Design

Students will develop skills required for critical appraisal of clinical research and application of the evidence to support decision-making in health care. Through a combination of videos, lectures, readings, and interactive activities, students will find, filter, interpret and apply evidence from the scientific literature to inform decisions about cases relating to individual patients (simulating ‘clinical’ decision-making in the interdisciplinary setting) and groups of patients (simulating ‘policy’ decision-making).

A devoted website on the Thinkific platform has been developed for this course. The link to redirect you to the course website will be listed on http://owl.uwo.ca.

- Asynchronous pre-work must be completed prior to synchronous sessions
- Attendance at synchronous sessions is required, unless exceptions apply
- Selected synchronous sessions will be recorded
5. Learning Outcomes

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

1. Describe the role of ‘evidence’ in decision-making in health care, and how to navigate uncertainty in decision-making.
2. Compare and contrast evidence-based decision-making versus other forms of decision making for individual patients and for groups of patients.
3. Identify types of bias in clinical research and decision-making, and describe the role of appropriate study design and analysis to reduce risk of bias.
4. Identify and formulate different types of clinical questions and policy questions in health care (diagnosis, prognosis, screening and prevention, therapy, harm).
5. Choose the best level of evidence to address different clinical and policy questions.
6. Critically appraise individual studies addressing therapy, harm, diagnosis, screening.
7. Critically appraise syntheses of studies including systematic reviews, meta-analyses, economic evaluations, and clinical guidelines.
8. Analyze and apply evidence from different study types to resolve case-based clinical questions or policy scenarios.
9. Discuss the role of interdisciplinary contribution of epidemiologists, biostatisticians, clinicians, and policymakers to improve evidence interpretation and application.
10. Understand the barriers and facilitators of getting from evidence to real world impact (knowledge translation).

6. Course Content & Schedule  (Classes take place in FNB 2220, unless marked VIRTUAL only)

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
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| 1    | Sept 11 (VIRTUAL only) | Intro to Clinical Epidemiology  
Bias in the Media & Assessing Claims |
| 2    | Sept 18         | Evidence-Based Decision Making  
Asking Clinical Questions & Selecting Evidence |
| 3    | Sept 25         | Using Measures of Effect  
Using P-values and 95% Confidence Intervals |
| 4    | Oct 2           | Critical Appraisal Framework  
Appraising Treatment Studies I |
|      | Oct 9           | Thanksgiving |
| 5    | Oct 16 (VIRTUAL only) | Appraising Treatment Studies II |
| 6    | Oct 23          | Appraising Diagnosis & Screening Studies  
Appraising Studies of Prognosis & Harm (TBD) |
|      | Oct 30          | Reading Week |
| 7    | Nov 6           | Appraising Evidence Syntheses I |
| 8    | Nov 13          | Appraising Evidence Syntheses II |
| 9    | Nov 20          | Research Integrity I & II |
| 10   | Nov 27          | GRADE’ing Evidence & Guidelines |
| 11   | Dec 4           | Integrative Session |
|      |                 | Final Assignments |
7. Participation and Engagement

- Students are expected to participate and engage with content as much as possible
- Students can also participate by interacting in forums with their peers and instructors
- Marks are not specifically allocated for participation in this course

8. Evaluation

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

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Format</th>
<th>Weight %</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>Bias in the Media (video submission)</td>
<td>10</td>
<td>Sept 25</td>
</tr>
<tr>
<td>Assignment 2</td>
<td><strong>Critical Appraisal</strong> (paper submission)</td>
<td>15</td>
<td>Oct 23</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>Teach it to me (video submission)</td>
<td>10</td>
<td>Nov 6</td>
</tr>
<tr>
<td>Assignment 4</td>
<td><strong>Critical Appraisal</strong> (paper submission)</td>
<td>15</td>
<td>Nov 6</td>
</tr>
<tr>
<td>Assignment 5</td>
<td>Teach it to me (video submission)</td>
<td>10</td>
<td>Nov 27</td>
</tr>
<tr>
<td>Assignment 6</td>
<td><strong>GRADE Assignment</strong> (paper submission)</td>
<td>20</td>
<td>Dec 22</td>
</tr>
<tr>
<td>Quizzes</td>
<td>Individual-Level and Team-Level Quizzes</td>
<td>20</td>
<td>~Weekly</td>
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- All assignments are due at 12:00 noon Eastern Time (ET) unless otherwise specified
- The Dec 22 due date for Assignment 6 is 12:00 noon ET
- Written assignments may be assessed for plagiarism ie, Turnitin (statement in policies below)
- Rubrics will be used to evaluate assessments and will be posted with the instructions
- Click [here](#) for a comprehensive set of policies and regulations concerning grading

**Information about late or missed evaluations:**

- Late assessments without self-reported absences will be subject to a late penalty of 20%/day

9. Communication:

- Students should email their instructor(s) and teaching assistant(s) using uwo email.
- Emails will be monitored daily by instructors or teaching assistants

10. Office Hours:

- Office hours in-person or via Zoom will be available upon request by contacting the teaching assistants or the instructor via uwo email.
11. Resources

- Resources and readings will be posted on the course website. You will receive an email from jmarti83@uwo.ca on or before Sept 10 to invite you to enroll in the course website on Thinkific.com
- Recommended Textbook:

12. Pre-Requisites Information

Undergraduate pre-requisites: Biostatistics 3100A and Epidemiology 3200A.

Undergraduate Policy: Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course, and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites or permissions.

Graduate Policy: Enrollment in this course is restricted to graduate students in the Department of Epidemiology and Biostatistics, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program.

13. 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 sold/shared
- Recordings are not permitted (audio or video) without explicit permission
- Permitted recordings are not to be distributed
- Students are expected to respect the academic integrity pledge for all assessments

14. How to Be Successful in this Class:

Students enrolled in this class should understand the level of autonomy and self-directed initiative required to be successful in this flipped classroom. What you get out of this course will be directly related to how much you invest in preparing before class and for team meetings.

1. Schedule time throughout each week to complete the asynchronous course material on the course website before Monday’s class.
2. During Monday’s synchronous classes, use the time as a safe space to explore and apply the concepts you have learned. Contribute actively during class.
3. Connect with others often. Study groups are encouraged.
4. Ask questions freely. If you are struggling with a topic, check with your team, or contact your teaching assistants or instructors.
5. Provide constructive feedback to the instructor and teaching assistants throughout the course, so that we know when things are working well or when improvement is needed.
6. The course is less about memorization, and more about applying concepts to solve cases. Note that this may feel uncomfortable at first. Embrace the uncertainty, and make learning and applying the goal.
15. Western Academic Policies and Statements

Absence from Course Commitments (Undergraduate policy)

A. Absence for medical illness:

Students must familiarize themselves with the Accommodation for Illness Policy.

A student seeking academic accommodation for any work worth less than 10% must contact the instructor or follow the appropriate Department or course specific instructions provided on the course outline. Instructors will use good judgment and ensure fair treatment for all students when considering these requests. You are not required to disclose details about your situation to your instructor; documentation is not required in this situation, and you should not send any pictures to your instructor.

If you are unable to meet a course requirement for any work worth 10% or greater due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counseling as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. Please note that the format of a make-up test, exam, or assignment is at the discretion of the course coordinator.

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

B. Absence for non-medical reasons:

Student absences might also be approved for non-medical reasons such as religious holidays and compassionate situations. Please review the policy on Accommodation for Religious Holidays. All non-medical requests must be processed by Academic Counselling. Not all absences will be approved; pay attention to the academic calendar and final exam period when booking any trips.

C. Special Examinations

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations and academic standing can be found here.

Absence from Course Commitments (Graduate policy)

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.

Statement on Academic Offences

Undergraduate Policy: Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Graduate Policy: 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

The following academic offense policies apply to all students:
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).

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Copyright and Audio/Video Recording Statement

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. You must always ask permission to record another individual and you should never share or distribute recordings.

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. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music webpage http://www.music.uwo.ca/, and our own McIntosh Gallery http://www.mcintoshgallery.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 Chair), or other relevant administrators in their unit. Health and Wellness-related information and services are available at https://www.uwo.ca/health/. Students who are in emotional/mental distress should refer to Mental Health@Western https://www.uwo.ca/health/ for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at https://www.uwo.ca/health/student_support/survivor_support/get-help.html. To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Accessible Education Western (AEW)

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

Students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly 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 AEW and their programs (normally the Program 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
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.

Undergraduate Students requiring academic counselling should contact the Science & Basic Medical Sciences Academic Counselling Office: https://www.uwo.ca/sci/counselling/.

Technology Requirements
You are responsible for all required course materials and announcements posted to the course’s OWL website. Please ensure after the first class that when you log in you are able to access the course site. A copy of the course outline will be available on both OWL and the departmental website.

Cell Phone and Electronic Device Policy
The Schulich School of Medicine & Dentistry is committed to ensuring that testing and evaluation are undertaken fairly across all our departments and programs. For all tests and exams, it is the policy of the School and the Department of Epidemiology and Biostatistics that any electronic devices, i.e., cell phones, tablets, cameras, or iPod are strictly prohibited. These devices MUST be left either at home or with the student’s bag/jacket at the front of the room and MUST NOT be at the test/exam desk or in the individual’s pocket. Any student found with one of these prohibited devices will receive a grade of zero on the test or exam. Non-programmable calculators are only allowed when indicated by the instructor. The Department of Epidemiology and Biostatistics is not responsible for stolen/lost or broken devices.

This course is a flipped classroom, which requires you to cover content before class. This allows us to work on applying knowledge during class.

Please feel free to provide feedback throughout the course. It really helps us to gauge how you are doing.

Looking forward to working with you this semester!