Department of Epidemiology and Biostatistics

Epidemiology 3315B/EPID 9515B/GHS 9017B
Epidemiology of Major Diseases: Global Perspectives

Winter 2023

Lecture: Mondays 11:30am-1:20pm
Location: WIRB 1170

Instructor: Dr. Saverio Stranges
Email: saverio.stranges@uwo.ca
Phone Extension: 86267

Tutorial: Wednesdays 11:30am-12:30 pm
Location: WIRB 1170

Co-instructor/TAs:
David Piskin & Patricia Nistor

Office Hours: By email

Course Information

Pre-requisites (undergraduates): Epidemiology 2200A/B and either Biology 2244A/B or Statistical Sciences 2244A/B. Unless you have either the requisites for this course or written special permission from the Undergraduate Chair to enroll, 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.

Course Syllabus

This survey course aims to provide students with an overview of the descriptive epidemiology (incidence and prevalence) and analytic epidemiology (risk and protective factors) of some of the infectious and chronic non-communicable diseases that are the leading causes of death and disability in Canada and globally. Students will learn measures of disease burden applied at the individual and population levels, including cost of illness, years of life lost due to mortality, and health adjusted life years. The effects of personal characteristics, place, and time are emphasized. Key methodological considerations for the execution or interpretation of studies of each disease will be highlighted.

Learning outcomes

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

- Describe the epidemiological characteristics and relative impact of major infectious and chronic non-communicable diseases, both nationally and globally
- Explain approaches to the prevention and control of these diseases from a public health perspective
- Identify methodological challenges associated with epidemiological studies of each condition
# Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Instructor</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January 9-11</td>
<td>Saverio Stranges</td>
<td>Course Overview, Introduction to Global Health and Preventive Medicine</td>
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<tr>
<td>2</td>
<td>January 16-18</td>
<td>Saverio Stranges</td>
<td>Introduction to Chronic Disease Epidemiology Global Epidemiology of Cardiovascular Disease</td>
</tr>
<tr>
<td>3</td>
<td>January 23-25</td>
<td>Brenda Coleman</td>
<td>Introduction to Infectious Disease Epidemiology</td>
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<tr>
<td>4</td>
<td>Jan/Feb 30-1</td>
<td>Brenda Coleman</td>
<td>Introduction to Infectious Disease Epidemiology</td>
</tr>
<tr>
<td>5</td>
<td>February 6-8</td>
<td>Lauren Cipriano Mike Silverman</td>
<td>COVID-19 pandemic: Global Epidemiology and Public Health Strategies</td>
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<td></td>
<td></td>
<td>Saverio Stranges</td>
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</tr>
<tr>
<td>6</td>
<td>February 13-15</td>
<td>Igor Karp</td>
<td>Global Epidemiology of Cancer</td>
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<tr>
<td>7</td>
<td>Feb/Mar 27-1</td>
<td>Kristin Clemens Lillian Barra</td>
<td>Global Epidemiology of Diabetes/Kidney Disease Global Epidemiology of Immunological Disease</td>
</tr>
<tr>
<td>8</td>
<td>March 6-8</td>
<td>F Olea Popelka Jessica Prodger</td>
<td>One Health in a Global Perspective Global Epidemiology of HIV/AIDS</td>
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<tr>
<td>9</td>
<td>March 13-15</td>
<td>Kathryn Nicholson</td>
<td>Global Epidemiology of Multimorbidity/Aging</td>
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<tr>
<td>10</td>
<td>March 20-22</td>
<td>Kelly Anderson Marnin Heisel</td>
<td>Global Epidemiology of Mental Disorders Suicide Prevention</td>
</tr>
<tr>
<td>11</td>
<td>March 27-29</td>
<td>Manuel Montero-Odasso Luciano Sposato</td>
<td>Risk factors &amp; Lifestyle Interventions for Dementia Global Epidemiology of Atrial Fibrillation &amp; Stroke</td>
</tr>
<tr>
<td>12</td>
<td>April 3-5</td>
<td>Shehzad Ali Noha Gomaa</td>
<td>Understanding the Role of Social Determinants Oral Diseases Epidemiology: From Practice to Policy</td>
</tr>
<tr>
<td>13</td>
<td>April 10</td>
<td>David Piskin Saverio Stranges</td>
<td>Review Sessions (to be agreed with the students, if necessary)</td>
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</tbody>
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All the lectures and tutorials will be broadcasted online, recorded as well and posted on OWL in case students cannot attend.

## Course Materials

**Optional:** Custom Course Book available at the campus book store.
Additional readings, lecture notes, and assignments will be posted to the course OWL page as required.

**Methods of Evaluation**

- 10% - Tutorial participation
- 10% - Weekly “one sentence” quizzes
- 20% - Midterm exam
- 30% - Assignment: Epidemiology of other diseases
- 30% - Final exam

**Tutorial Participation (10%):**
- Students are expected to actively participate in all tutorial discussions and activities.
- Note that participation will be assessed by the TAs on a weekly basis. Absences without a valid reason will be assigned a mark of zero.

**Weekly “one sentence” quizzes (10%):**
- Following each Monday session, students will complete a “one sentence quiz” on a topic covered during the lesson.
- The best ten quiz marks will be used to calculate this grade.
- Students who are absent will receive a grade of zero for that week’s quiz.

**Midterm exam (20%):**
- The midterm exam will consist of a combination of multiple choice and short answer questions, and will include material from lectures, readings, and tutorials for the first half of the term (up to reading week).
- **Date:** February 15, 2023

**Assignment: Epidemiology of other diseases (30%):**
- Each student will select a disease that has NOT been previously covered in the course and will prepare a written report on the descriptive and analytic epidemiology of the condition, as well as public health efforts towards prevention and control. Students will further provide a critical analysis of challenges to study design and interpretation for their disease of choice (25% of grade).
- Students will also give a 5 to 8-minute presentation on the topic (5% of grade). The presentation will be recorded and uploaded on OWL.
- Proposed topics must be cleared with the instructor by **February 28th, 2023**.
- **Report Due Date:** March 31st, 2023 on OWL by 12:00 pm
- **Presentation Due Date:** April 5th, 2023 on OWL by 12:00 pm

**Final Exam:**
- The final exam will consist of a combination of multiple choice and short answer questions, and will include material from all lectures, readings, and tutorials over the course of the semester.
• The exam will be scheduled during the final exam period.

**Marking reassessments:**
Should you have concerns about a mark you have received on an exam or assignment, you are welcome to request a reassessment from the instructor. In order to request a reassessment, please write one paragraph explaining why you believe you deserve a different mark from the one that you received. This will be read in conjunction with your original submission. The instructor will reassess your exam or assignment based on this information. Requests for changes in marking made in any other manner will not be considered.

**Late assignment policy:**
Please negotiate an alternative deadline with the instructor in advance if you foresee difficulties meeting the assigned due date.

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**Western Academic Policies and Statements**

**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.

**Absence from Course Commitments (Undergraduate Policies)**

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.

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 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.

**Accessibility Statement**

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education (AE) at 661-2111 x 82147 for any specific question regarding an accommodation or review the [Policy on Accommodation for Students with Disabilities](#).

**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**

The following links provide information about support services at Western University:

- [Academic Counselling (Science and Basic Medical Sciences)](#)
- [Appeal Procedures](#)
- [Registrarial Services](#)
- [Student Development Services](#)
- [Student Health Services](#)

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](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.

**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.