

MDSC 415
Introduction to Epidemiology

Course Coordinator and Instructor:

Fabiola Aparicio-Ting, MPH PhD
Senior Instructor, Community Health Sciences
Cumming School of Medicine
feaparc@ucalgary.ca

Office Hours/Policy on Answering Student Emails

Please book appointments by email. Email communications with the instructor and the TA are welcome. All efforts will be made to respond to emails within 48 hours. Substantive issues are to be addressed in person, either in class or during an appointment.

Teaching Assistant:

Mina Fahim
MSc student, Epidemiology
Community Health Sciences, Cumming School of Medicine
mina.fahim@ucalgary.ca

Time and Location:

Tuesdays & Thursdays 3:30pm – 4:45pm
1405B, Health Science Centre
Foothill Campus

Please consult course schedule to confirm location of individual sessions.

Prerequisites:

Enrolment in the Bachelor of Health Science program and MDSC 308 or consent from the course instructor.

Course Description:

This course will introduce students to the basic concepts of epidemiology needed to understand and critically analyze research pertaining to health and disease in populations and to develop health research literacy. Methods used in descriptive and analytic epidemiological studies, including the design, analysis and interpretation of results for observational studies and clinical trials will be discussed. Case studies and contemporary events will be used to illustrate epidemiology in action and to highlight the social aspects of applying epidemiology in public health.

Overarching Theme

Students will be introduced to sub-disciplines within Epidemiology, which may include Social Epidemiology, Infectious Disease Epidemiology, Cancer Epidemiology and Genetic Epidemiology. This course has been designed to provide students with opportunities to practice and refine skill sets, including: written responses and critical analysis of published research.

Global Objective

To foster excitement and interest in epidemiology in an interactive classroom environment that is positive, engaging and intellectually challenging.

Learning Objectives

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

1. Illustrate the interplay between epidemiology and population and public health using examples.
2. Define and correctly use epidemiological terms and vocabulary.
3. Discuss disease causation, statistical associations and causal inference.
4. Calculate and interpret measures of disease frequency and cite their strengths and limitations.
5. Identify sources of bias and confounding in epidemiological research.
6. Discuss the design and methodology of each of the observational study designs and identify the strengths and limitations of each.
7. Identify, estimate and interpret the appropriate measures of association for each of the observational study types.
8. Critically analyze health research, particularly observational research on human populations.

Learning Resources

Gordis, L. Epidemiology, 6th Edition. (2018). Philadelphia: Elsevier Saunders.

This required textbook is available for purchase from the University of Calgary Medical Bookstore.

The list of required reading, including links to sources beyond the textbook, will be posted on D2L.

Recommended Textbooks/Readings

A Dictionary of Epidemiology, 4th Edition. (2001). Last JM (editor). New York, NY; Oxford University Press.

A Note regarding readings

A list of required readings will be outlined on D2L and links and documents will be made available, where possible. Required readings have been chosen carefully to inform you and enhance the lecture material. **Students are REQUIRED to complete assigned readings BEFORE each lecture.** Instructors will proceed in class on the assumption that students have read completely the assigned readings. Students should be aware that many of the readings they will be assigned may be of an unfamiliar nature and style. Students should allot sufficient time to allow for several reads of the assigned material.

Learning Technology Requirements

Brightspace (by D2L) is located on the University of Calgary server and will be used extensively for communication with students. **It is the student's responsibility to ensure that they receive all posted communications and documents and that they receive emails sent by instructors or fellow students through D2L.**

Only your @ucalgary.ca email address may be linked to D2L. Please ensure that you are regularly checking your @ucalgary.ca account.

Evaluation

The University policy on grading and related matters is described in section F of the 2021-2022 Calendar.

In determining the overall grade in the course, the following weights will be used:

Evaluation Activity	Percentage of Grade	Due Date	Learning Objectives Addressed
Critical analysis assignment #1	15%	February 15, 2022	#1, #2, #4
Critical analysis assignment #2	20%	March 29, 2022	#2, #5, #6, #7, #9
Critical analysis assignment #3	20%	April 12, 2022	#2, #3, #5, #7, #8, #9
Class participation	10%	Ongoing	all
Final exam	35%	Scheduled by the Registrar	all

Registrar-Scheduled Final Examination:

The final examination will be cumulative and closed-book and will contain both multiple choice and short answer questions. Only a non-programmable calculator will be allowed. Consult Section G of the University of Calgary Calendar for rules governing final examinations.

A student's final grade for the course is the sum of the separate assignments. It is not necessary to pass each assignment separately in order to pass the course."

Grading Scheme:

Letter Grade	Description	Percentage
A+	Outstanding performance	96-100
A	Excellent performance	90-95
A-	Approaching excellent performance	85-89
B+	Exceeding good performance	80-84
B	Good performance	75-79
B-	Approaching good performance	70-74
C+	Exceeding satisfactory performance	65-69
C	Satisfactory performance	60-64
C-	Approaching satisfactory performance	57-59
D+	Marginal pass	54-56
D	Minimal pass	50-53
F	Did not meet course requirements	0-49

Missed Components of Term Work:

Late assignments will receive 20% grade penalty within 24 hours of the deadline, after which assignments will not be accepted and will receive a mark of zero. The only exceptions to this are those in keeping with the University Calendar (debilitating illness, religious conviction, or severe domestic affliction) that are received in writing and with supporting documentation.

Extensions will NOT be granted on any assignment in MDSC 415. The only exceptions to this are those in keeping with the University Calendar (debilitating illness, religious conviction, or severe domestic affliction) that are received in writing and with supporting documentation. Traffic jams and late or full buses are common events in Calgary and are NOT acceptable reasons for late arrivals to class, meetings

and examinations. Please note that while absences are permitted for religious reasons, students are responsible for providing advance notice and adhering to other guidelines on this matter, as outlined in the University Calendar (<https://www.ucalgary.ca/pubs/calendar/current/e-4.html>).

Course Evaluations and Student Feedback

Student feedback will be sought at the end of the course through the Universal Student Rating of Instruction (USRI) and a qualitative student evaluation. Students are welcome to discuss the process and content of the course at any time with the instructor. Students may also address any concerns they may have with Dr. Ebba Kurz, Associate Dean (Undergraduate Health and Science Education) in the Cumming School of Medicine (kurz@ucalgary.ca).

Attendance

It is important that you make every effort to attend all sessions since much of the learning in this course will be gained through in-class discussions. Marks for participation cannot be gained unless you are in attendance. Please notify the instructor directly via email for any extended absences.

Conduct During Lectures

The classroom should be respected as a safe place to share ideas without judgement - a community in which we can all learn from one another. Students are expected to frame their comments and questions to lecturers in respectful and appropriate language, always maintaining sensitivity towards the topic. Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment.

As members of the University community, students, employees and academic staff are expected to demonstrate conduct that is consistent with the University of Calgary Calendar, the Code of Conduct and Non-Academic Misconduct policy and procedures, which can be found at <https://www.ucalgary.ca/legal-services/university-policies-procedures>.

Students are expected to take notes during class and should not rely solely on material supplied by the instructors.

Use of Internet and Electronic Communication Devices in Class

The Bachelor of Health Sciences program aims to create a supportive and respectful learning environment for all students. The use of laptop and mobile devices is acceptable when used in a manner appropriate to the course and classroom activities. However, research studies have found that inappropriate/off-topic use of electronic devices in the classroom negatively affects the learning of others during class time.

Students are responsible for being aware of the University's Internet and email use policy, which can be found at <https://www.ucalgary.ca/policies/files/policies/electronic-communications-policy.pdf>.

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS

Copyright

All students are required to reach the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright-policy.pdf>) and requirements of the Copyright Act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of

unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks, etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy <https://www.ucalgary.ca/pubs/calendar/current/k.html>.

Instructor Intellectual Property

Course materials created by instructors (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third-party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course *at the same time* may be allowed under fair dealing.

Academic Accommodations

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at <https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>. Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities (<https://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities.pdf>). SAS will process the request and issue letters of accommodations to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/.

Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to Dr. Ebba Kurz, Associate Dean (Undergraduate Health and Science Education) (kurz@ucalgary.ca).

Academic Misconduct

The University of Calgary is committed to the highest standards of academic integrity and honesty. The University of Calgary has created rules to govern all its members regarding the creation of knowledge and the demonstration of knowledge having been learned.

Academic Misconduct refers to student behaviour that compromises proper assessment of a student's academic activities and includes (but is not limited to): cheating, fabrication, falsification, plagiarism, unauthorized assistance, failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses, and failure to comply with exam regulations applied by the Registrar. **It also includes using of third-party websites/services to access past/current course material, essay/assignment writing services, or real-time assistance in completing assessments, seeking answers to assessment questions and similar, whether paid, bartered or unpaid.**

For information of the Student Academic Misconduct Policy and Procedures, please visit; <https://ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf>
<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-procedure.pdf>

Additional information is available on the Academic Integrity website at: <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>.

Recording of Lectures

Audio or video recording of lectures (or similar) is **prohibited** except where explicit permission has been received from the instructor or it is an approved accommodation.

Freedom of Information and Protection of Privacy Act

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary

Appeals

If there is a concern with the course, academic matter or a grade, first communicate with the instructor. If these concerns cannot be resolved, students can proceed with an academic appeal, as per Section I of the University Calendar. Students must follow the official reappraisal/appeal process and may contact the Student Ombuds' Office (<http://www.ucalgary.ca/ombuds>) for assistance with this and with any other academic concerns, including academic and non-academic misconduct. Students should be aware that concerns about graded term work may only be initiated **within 10 business days** of first being notified of the grade. <https://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Sexual and Gender-Based Violence Policy

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual and gender-based violence policy guides us in how we respond to incidents of sexual and gender-based violence, including supports available to those who have experienced or witnessed sexual or gender-based violence, or those who are alleged to have committed sexual or gender-based violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-Violence-Policy.pdf>.

Resources for Support of Student Learning, Success, Safety and Wellness

Student Success Centre	http://www.ucalgary.ca/ssc/
Student Wellness Centre	http://www.ucalgary.ca/wellnesscentre/
Distress Centre	http://www.distresscentre.com/
Library Resources	http://library.ucalgary.ca

Wellness and Mental Health Resources

The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the excellent mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (<https://www.ucalgary.ca/wellnesscentre/services/mental-health-services>) and the Campus Mental Health Strategy (<http://www.ucalgary.ca/mentalhealth/>).

Student Ombuds' Office

The Student Ombuds' Office supports and provides a safe, neutral space for students. For more information, please visit www.ucalgary.ca/ombuds/ or email ombuds@ucalgary.ca

BHSc Student Faculty Liaison Committee (SFLC)

The BHSc SFLC, with elected representatives from all majors, serves to raise issues of interest to BHSc students to the program administration, including items pertaining to curriculum, scheduling and events. A list of current representatives can be found on the BHSc website.

Student Union (SU) Information

The SU Vice-President Academic can be reached at (403) 220-3911 or suvpaca@ucalgary.ca; the SU representatives for the Cumming School of Medicine can be reached at medrep1@su.ucalgary.ca or medrep2@su.ucalgary.ca.

Student Success Centre

The Student Success Centre provides services and programs to ensure students can make the most of their time at the University of Calgary. Our advisors, learning support staff, and writing support staff assist students in enhancing their skills and achieving their academic goals. They provide tailored learning support and advising programs, as well as one-on-one services, free of charge to all undergraduate and graduate students. For more information visit: <https://www.ucalgary.ca/student-services/student-success>

Emergency Evacuation/Assembly Points

As part of the University of Calgary Emergency Evacuation plan, students, faculty, and staff should locate the closest Assembly Point in case of Fire Alarm. Safety signage is posted throughout the campus showing the locations and the possible route to these locations. All students, faculty, and staff are expected to promptly make their way to the nearest Assembly Point if the Fire Alarm is activated. No one is to return into campus facilities until an all clear is given to the warden in charge of the Assembly Area. For more information, see <https://www.ucalgary.ca/emergencyplan/building-evacuation/assembly-points>

Safewalk

Campus security will escort individuals, day or night, anywhere on campus (including McMahon Stadium, Health Sciences Centre, Student Family Housing, the Alberta Children's Hospital and the University LRT station). Call 403-220-5333 or visit <http://www.ucalgary.ca/security/safewalk>. Use any campus phone, emergency phone or the yellow phone located at most parking lot pay booths. Please ensure your personal safety by taking advantage of this service.

Class Schedule:

The weekly schedule of topics and required readings is posted on D2L. The course schedule provided is provisional, with the exception of assignment due dates. Circumstances could give rise to scheduling changes. Please check D2L for updates.