

Department of Epidemiology and Biostatistics

Biostatistics 3100A/9509A

Biostatistical Methods for Epidemiology/Principles of Biostatistics

Lecture: Kresge, Room K203

Tuesday 10:30 am - 11:30 am

Thursday 10:30 am - 11:30 am

Instructor: Neil Klar

Office Hour: By appointment

E-mail: nklar@uwo.ca

Phone Extension: 86275

Lab: Kresge, Room K7

Undergrad: Thursday 11:30 am-12:30 pm

Grad: Thursday 12:30 pm-1:30 pm

Course Information

Undergraduate Pre-requisites: Biology 2244A/B or Statistical Sciences 2244A/B, and Epidemiology 2200A/B, with a minimum mark of 75% in each.

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.

Course Syllabus

The purpose of this course is to introduce students to statistical methods used in epidemiology in particular and medical research in general.

Week	Date	Lecture Topic	Chapters
	Sep 5	No Class (Undergraduate orientation)	-
1	Sep 10, 12	Introduction and descriptive statistics	1,2
2	Sep 17, 19	Probability and distributions	3
3	Sep 24, 26	Sampling and sampling distributions	4
4	Oct 1, 3	Inference for a single group	5
5	Oct 8, 10	Inference for two groups	6
6	Oct 15, 17	Review Tuesday / Midterm Thursday / No Labs	
7	Oct 22, 24	Inference for Categorical Data	7
8	Oct 29, 31	Comparing Risks in Two Populations	8

	Nov 4-10	Study Break: No Classes / No Labs	
9	Nov 12,14	Analysis of Variance	9
10	Nov 19, 21	Correlation and Regression	10
11	Nov 26, 28	Logistic Regression	11
12	Dec 3, 5	Nonparametric tests	12
Final Exam			

Course Materials

Text: D'Agostino RB et al. Introductory Applied Biostatistics. United States: Thomson, Brooks/Cole, c2006.

Solutions Manual available as a course package from the UWO Bookstore
Lecture notes will be provided on the course WebCT.

Methods of Evaluation

- 30% - Assignments due at the Thursday lab (total of 8 assignments)
- 10% - In-class one-question quiz, (best 5 of 10 for undergraduates and best 7 of 10 for graduate students)
- 20% - Midterm exam (Thursday, Oct. 17 – LAB CANCELLED)
- 40% - Final exam (during exam period)

Note that:

1. to pass the course, students must submit at least 7 in-class one question quizzes and obtain a minimum of 50% on the final exam
2. if you miss an assignment or an in-class one-question quiz without a valid documented reason (medical or bereavement), you will be assigned a grade of 0%.
3. For the midterm exam, students will be allowed to use a calculator and a one-page double sided formula sheet, but will not be allowed internet access or computers.
4. For the final exam, students will be allowed to use a calculator and two one-page doubled sided formula sheets, but will not be allowed internet access or computers.

Policy on Accommodation for Medical and Non-Medical Absences

Refer to Western's Policy on Academic Consideration for Student Absences:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf (updated as of September 1, 2019).

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 by the instructor for either medical or non-medical academic accommodation, then such documentation must be submitted by the student directly to the appropriate Faculty Dean's office and not to the instructor. It will be the Dean's office that will determine if accommodation is warranted.

Statement on Academic Offences

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

- Undergraduate students:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.
- Graduate students:
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>).

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.

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 web page <http://www.music.uwo.ca/>, and our own McIntosh Gallery <http://www.mcintoshgallery.ca/>. 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/>
Student Development Centre: <http://www.sdc.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.

Student Accessibility Services

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 Student Accessibility Services, 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.

Department & Faculty Offices

The Epidemiology and Biostatistics main office is located in K201 in the Kresge Building on Main campus.

For undergraduate academic counselling assistance, students will need to speak with 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.