Department of Epidemiology & Biostatistics
Epidemiology 9516T:
Analysis of Population Health Data

Time: Wednesday, 8:30 am – 11:30 am
Location: TBD/Kresge Building K7

Instructor: Piotr Wilk
Office Hours: By appointment
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Phone Extension: 89109

Teaching Assistant: TBD
Office Hours: TBD
E-Mail: TBD

Course Information
This course will introduce and familiarise students with selected methodological and statistical techniques related to the analysis of population health data. In this hands-on seminar, students will learn how to prepare and clean data files and how to address some of the methodological challenges of working with survey data. Students will further develop their analytical skills by conducting a linear or logistic regression analysis on selected health outcomes, using data from the 2013-2014 Canadian Community Health Survey. Working in small groups, students will complete all stages of the research project, from conducting a literature review to presenting the results. Finally, students will be introduced to multilevel modeling techniques for hierarchical data. All analyses will be conducted with SAS.

Course Syllabus and Learning Objectives
- **Week 1 (February 27):** Course overview and exploratory analysis of survey data. In this lecture, students will learn how to prepare and clean secondary data files for further analysis and how to generate basic descriptive statistics. [Assignment 1]
- **Week 2 (March 6):** Applied linear regression. In this lecture, students will practice and further develop their skills in building and testing linear regression models and how to interpret the results. [Assignment 2]
- **Week 3 (March 13):** Analysis of categorical data. In this lecture, students will practice and further develop their skills in modeling categorical response variables and how to interpret the results. [Assignment 3]
- **Week 4 (March 27):** Selected methodological issues. In this lecture, students will learn how to address some of the methodological challenges of working with survey data such as missing data.
- **Week 5 (April 3): Multilevel analysis.** In this lecture, students will be introduced to the basic concepts of multilevel modeling.
- **Week 6 (April 10): TBD.**

**Course Materials**
There are no mandatory textbooks for this course. The weekly readings will be provided by the instructor.

**Prerequisite**
There are no prerequisites for this course. However, students are expected to have basic knowledge of multivariate linear and logistic regression analyses. Prior knowledge and experience using the SAS System is beneficial but not a requirement for this course.

**Recommended Books**

**Methods of Evaluation**

a) Exploratory analysis of survey data – 15%
   - Assignment – 10%  (Due March 4)
   - Peer Review – 5%  (Due March 5)

b) Linear regression – 15%
   - Assignment – 10%  (Due March 11)
   - Peer Review – 5%  (Due March 12)

c) Logistic regression – 15%
   - Assignment – 10%  (Due March 18)
   - Peer Review – 5%  (Due March 19)

d) Group Project (Proposal) – 15%
   - Proposal – 10%  (Due March 25)
   - Peer Review – 5%  (Due March 29)

e) Group Project (Final Draft) – 35%
   - Proposal – 10%  (Due TBD)
   - Peer Review – 25%  (Due TBD)

If for any reason you are unable to meet one or more of the requirements, it is essential that you let the instructor know in advance or as soon as you are aware of the situation.
Important Policy Information

Policy on Prerequisites
Unless you have either the requisites for this course or written special permission to enroll in it, you may be removed from this course and it will be deleted from your record. Students may seek permission from the Graduate Chair. 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.

Policy on Accommodation for Medical and Non-Medical Absences
For assignments worth 10% or more, refer to Western University’s Policy on Accommodation for Medical Illness: https://studentservices.uwo.ca/secure/index.cfm.

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.

Policy on Recording Classes
Classes may not be audio-recorded without advance written permission from the instructor and other students, and may not be video-recorded. Permission will not be granted for classes involving unpublished materials from the instructor or others.

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: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

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/.

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. Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html.

To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: http://www.health.uwo.ca/mental_health/module.html. This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.

Department & Faculty Offices
The Epidemiology & Biostatistics main office is located in K201 in the Kresge Building on Main campus.