

Syllabus:

GGR270 – Introductory Analytical Methods

University of Toronto, Fall 2020

Online

Lectures Pre-recorded/Tutorials are Live

Lauren Jewett

Instructor Email: lauren.jewett@mail.utoronto.ca

Office Hours: Wednesday from 12:00 – 13:00 EST on Quercus Blackboard Collaborate

Teaching Assistants

Catherine Jimenea – c.jimenea@mail.utoronto.ca

Mehrdad Shirinbakhsh – m.shirinbakhsh@mail.utoronto.ca

Bochu Liu - bochu.liu@mail.utoronto.ca

Amber DeJohn - amber.dejohn@mail.utoronto.ca

Course Description

This course introduces students to elementary analytical concepts of quantitative methods. The principal focus will be on statistical techniques, with an emphasis on their use with spatial and geographic data. When these concepts and techniques are understood, students will possess a powerful analytical toolkit which will aid them in research design and analysis, research projects or papers, other geography courses, and social and physical sciences courses generally. The techniques are also frequently used in the jobs that geographers take up on graduation. In addition to learning these new analytical methods, students will learn ways to interpret and communicate their findings – an integral part of engaging in the discipline. The course is a requirement for geography majors and is also a prerequisite for more advanced 'method courses' in geography (and in other departments).

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Learning Outcomes

1. Use descriptive statistics, probability models, hypothesis testing, and regression techniques to characterize and analyze datasets;
2. Understand basic spatial statistical techniques;
3. Interpret and communicate, in writing, results of quantitative analyses.

Course Organization

Access to Course Materials & Readings

GGR270 is an online course. There will be no **required** live components. Lectures will be given as pre-recorded online videos asynchronously. Tutorials and open-question sessions will be live (synchronous), but not mandatory. Students will have the opportunity for on-demand live meetings to ask questions and clarifications about lecture and assessment. Lectures will begin Sept 16th, 2020 and carry on afterwards. Instructor office hours will begin the week of Sept 16th. Tutorials and TA office hours will begin the week of Sept 23rd. Students require a microphone in their computer to ask questions, however will not be asked to be on video/webcam at any point in the course. This course will use the **free** software RStudio for tutorials and assignments. See installation guide [here](#). If you are unable to install this software, you will be able to use [RStudioCloud](#), which allows you to run R code online.

Submissions

All written assignments are submitted electronically in .pdf format, and must be uploaded on the Quercus course website *before the deadline* on the day the assignment is due. Please keep a back-up copy of all assignments even after they have been submitted, as well as rough notes and other prep work. When you hand in your assignments through Quercus, they will be automatically submitted to [Turnitin.com](#) for a review of textual similarity and detection of possible plagiarism. *In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.* You may choose to **opt-out** of your work being automatically run through Turnitin.com using the following process:

- You must notify the instructor **no later than Sept 24th, 2020** by written statement via email to the instructor from your uToronto email account
- All of your assignment submissions must be via email to the instructor and include the following, as per UToronto suggested guidelines:
 - annotated bibliographies;
 - submit all rough work with their papers;
 - include the call numbers or web site addresses of all sources cited in their paper.
 - The instructor may request a live meeting to discuss the work and ask the student questions about their submitted work

Tutorials

Tutorials will be online and live (synchronous). The Teaching Assistant will have their webcam on, however you will never be asked to. Tutorials **will not** be recorded for student privacy. Students can ask questions by “raising their hand” or by using the chat function. Tutorials will be hosted on Quercus on Blackboard Collaborate. All times are in Eastern Standard Time. The tutorial sections are as follows: TUT0101 (Wed 16:00 – 17:00), TUT0201 (Thurs 11:00 – 12:00), TUT0301 (Thurs 12:00 – 13:00), TUT0401 (Thurs 14:00 – 15:00), TUT5101 (Wed 17:00 – 18:00), TUT5201 (Wed 18:00 – 19:00).

Assignments and Evaluation

Key Dates

1. Quizzes 15% Total
*Quizzes will be online and available to start during the scheduled lecture time. Once you open the online quiz, you will have 30 minutes to complete it. If you require accessibility accommodations please email the instructor during the first week of class, or a **minimum of 48 hours** prior to the quiz date.*
 - a. Quiz #1 (5%) Oct 2
 - b. Quiz #2 (5%) Oct 23
 - c. Quiz #3 (5%) Nov 6
2. Problem Sets 30% total
 - a. Problem Set 1 (10%) Oct 9
 - b. Problem Set 2 (10%) Oct 30
 - c. Problem Set 3 (10%) Nov 27
3. Final take home exam 55% Dec 15th at 11:59pm
The final take-home exam questions will be made available to students on December 11th 2020 at 9am EST and be due via the Quercus assignment dropbox as a .pdf by Dec 15th at 11:59pm.

Late Penalties

Quizzes will not be accepted late, because answers are released shortly following each quiz. For **problem sets**, a late penalty of 5% of the total value of the assignment will be deducted from the grade per day for late work (including weekend days). Extensions will be granted in the case of illness or other emergencies, please do your best to get in touch in advance however we understand that is not always possible. If you anticipate that you may be unable to meet an assignment deadline, please contact the instructor in advance to make other arrangements. If you require accommodation for a disability or long-term illness, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible at disability.services@utoronto.ca and forward documentation to the instructor.

Required Text

Free download through Quercus – Course Reserves using your UTORID login through UToronto Library system

Rogerson, P. A. (2001). *Statistical methods for geography*. London, : SAGE Publications, Ltd doi: 10.4135/9781849209953

Course Schedule

Reminder: All lectures are pre-recorded (asynchronous) to be viewed at your convenience and posted each week on Wednesdays. Tutorials and office hours are live (synchronous) and not recorded (for student privacy), and not mandatory.

Week	Date and Lecture Topic	Textbook Chapter	Assessments (due at 11:59pm EST)
Week 1	Sept 16 th : Course Overview and Introduction to Statistics, Instructor office hours start	Ch 1	No assessments
Week 2	Sept 23 rd : Descriptive Statistics, Tutorials and TA office hours start	Ch 1	No assessments
Week 3	Sept 30 th : Probability Models	Ch 2	Quiz 1 due Oct 2 nd
Week 4	Oct 7 th : Distributions	Ch 2	Problem Set 1 due Oct 9 th
Week 5	Oct 14 th : Confidence Intervals and Hypothesis Testing	Ch 3	No assessments
Week 6	Oct 21 st : Sampling	Ch 3	Quiz 2 due Oct 23 rd
Week 7	Oct 28 th : Analysis of Variance	Ch 4	Problem Set 2 due Oct 30 th
Week 8	Nov 4 th : Correlation	Ch 5	Quiz 3 due Nov 6 th
Reading Week Nov 9th – 12th no lecture, tutorials, office hours or assessments			
Week 9	Nov 18 th : Regression	Ch 6 & 7	No assessments
Week 10	Nov 25 th : Spatial Patterns	Ch 8 & 9	Problem Set 3 Due Nov 27 th
Week 11	Dec 2 nd : Visualizations	n/a	No assessments
Week 12 *last day of classes, no tutorials*	Dec 9 th : Course Review	n/a	No assessments
Exam Session	Take home exam available Dec 11 th at 9am EST	n/a	Due Dec 15 th

Course Policies & Expectations

Reread requests

Re-grade requests are available in this course, as one per assignment. The re-grade will be completed by the teaching assistant who is available to regrade and may not be the same teaching assistant who originally graded your work. Moreover, the new grade will be the final grade, regardless of if your new grade is higher or lower than the original.

Recording/electronics usage

Student participation will not be recorded in this class. Live (synchronous) student dropin (office hours) sessions and tutorials will not be recorded, and students will not be asked to be on webcam at any point, however if students choose to be, that is acceptable. Students will require the use of a microphone in their computer to ask questions, however if they do not have a microphone the chat function is available to ask questions.

Students may not create audio recordings of classes, tutorials or office hours with the exception of those students requiring an accommodation for a disability, who should speak to the instructor prior to beginning to record lectures.

Students creating unauthorized audio recording of lectures, tutorials or office hours violate an instructor's intellectual property rights and the Canadian Copyright Act. Students violating this agreement will be subject to disciplinary actions under the Code of Student Conduct.

Course videos may not be reproduced or posted or shared anywhere other than the official course Quercus site and should only be used by students currently registered in the course. Recordings may be saved to students' laptop for personal use.

Because recordings will be provided for all lectures, students may not create additional audio or video recordings without written permission from the instructor. Permission for such recordings will not be withheld for students with accommodation needs.

Academic Integrity

Academic integrity is fundamental to learning and scholarship at the University of Toronto. At the University of Toronto, the following things are considered academic offences:

- Using someone else's ideas without appropriate acknowledgement (i.e., in-text citation)
- Copying material directly from a source and not placing the words within quotation marks
- Submitting your own work in more than one course without the permission of the instructor
- Making up sources or facts, or including references to sources that you did not use
- Obtaining or providing unauthorized assistance on any assignment including having someone else complete part or all of an assignment for you, and/or having someone rewrite or add material to your work while editing (having someone read your work is a good idea, but they should tell you what is wrong, not fix it for you)

The University of Toronto treats cases of academic misconduct very seriously. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. If you have questions about appropriate research and citation methods, please talk to me. If you are experiencing personal challenges that are having an impact on your academic work, please speak to me or seek the advice of your college registrar. More information is available at www.artsci.utoronto.ca/osai/students.